



Whiting Petroleum Corp.

Weld County, CO

Sec 25-T10N-R58W

Razor #25N-2407

Hz

APD

Anticollision Report

15 May, 2015



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	Hz	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Reference	APD		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.00usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,550.00 usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	3.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	5/15/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	15,691.20	APD (Hz)	MWD+IFR1+MS+sag	Fixed:v2:crustal dec & 3-axis correction + sag	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Sec 25-T10N-R58W						
Razor #25N-2405 - Hz - APD	300.00	300.00	59.22	57.61	36.673	CC, ES
Razor #25N-2405 - Hz - APD	15,691.20	15,626.44	659.56	356.58	2.177	SF
Razor #25N-2406 - Hz - APD	300.00	300.00	29.22	27.61	18.096	CC, ES
Razor #25N-2406 - Hz - APD	15,691.20	15,668.31	335.94	37.52	1.126	Level 2, SF
Razor #25N-2408 - HZ - APD	300.00	300.00	30.78	29.16	19.058	CC, ES
Razor #25N-2408 - HZ - APD	15,691.20	15,720.80	336.69	38.19	1.128	Level 2, SF
Razor #25N-2437 - Hz - APD	300.00	300.00	77.89	76.28	48.232	CC
Razor #25N-2437 - Hz - APD	400.00	397.67	78.02	75.79	35.068	ES
Razor #25N-2437 - Hz - APD	15,691.20	15,918.20	845.25	548.18	2.845	SF
Razor #25N-2438 - Hz - APD	515.06	511.47	57.44	54.53	19.749	CC, ES
Razor #25N-2438 - Hz - APD	15,691.20	16,022.11	573.59	305.38	2.139	SF
Razor #25N-2439 - Hz - APD	1,151.95	1,149.64	30.53	23.46	4.317	CC
Razor #25N-2439 - Hz - APD	1,200.00	1,197.62	30.64	23.23	4.138	ES
Razor #25N-2439 - Hz - APD	15,691.20	15,828.65	249.82	32.11	1.147	Level 2, SF
Razor #25N-2440 - Hz - APD	300.00	300.00	58.36	56.74	36.135	CC
Razor #25N-2440 - Hz - APD	400.00	398.01	58.78	56.57	26.584	ES
Razor #25N-2440 - Hz - APD	15,691.20	16,010.07	334.66	155.48	1.868	SF

Offset Design Sec 25-T10N-R58W - Razor #25N-2405 - Hz - APD												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-90.98	-1.01	-59.22	59.22				
100.00	100.00	100.00	100.00	0.13	0.13	-90.98	-1.01	-59.22	59.22	58.96	0.27	222.357	
200.00	200.00	200.00	200.00	0.47	0.47	-90.98	-1.01	-59.22	59.22	58.28	0.94	62.961	
300.00	300.00	300.00	300.00	0.81	0.81	-90.98	-1.01	-59.22	59.22	57.61	1.61	36.673	CC, ES
400.00	399.98	397.96	397.94	1.11	1.12	79.33	-1.30	-60.87	60.57	58.34	2.22	27.243	
500.00	499.84	495.70	495.55	1.41	1.43	82.90	-2.17	-65.80	64.78	61.95	2.82	22.950	
600.00	599.59	593.08	592.56	1.72	1.76	86.67	-3.61	-73.97	72.36	68.89	3.46	20.888	
700.00	699.35	689.94	688.74	2.04	2.10	88.89	-5.61	-85.31	83.36	79.23	4.13	20.193	
800.00	799.11	787.22	784.92	2.37	2.46	89.94	-8.15	-99.69	97.34	92.53	4.81	20.239	
900.00	898.86	886.14	882.62	2.72	2.84	90.61	-10.83	-114.92	111.95	106.47	5.49	20.409	
1,000.00	998.62	985.06	980.32	3.06	3.23	91.13	-13.52	-130.16	126.58	120.41	6.17	20.518	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



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Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
1,100.00	1,098.38	1,083.98	1,078.02	3.41	3.62	91.54	-16.21	-145.40	141.21	134.35	6.86	20.587		
1,200.00	1,198.13	1,182.90	1,175.72	3.76	4.01	91.87	-18.90	-160.64	155.85	148.29	7.55	20.631		
1,300.00	1,297.89	1,281.82	1,273.43	4.12	4.41	92.14	-21.58	-175.88	170.49	162.24	8.25	20.659		
1,400.00	1,397.65	1,380.74	1,371.13	4.47	4.81	92.38	-24.27	-191.12	185.13	176.18	8.95	20.677		
1,500.00	1,497.40	1,479.66	1,468.83	4.82	5.21	92.57	-26.96	-206.36	199.78	190.12	9.66	20.687		
1,600.00	1,597.16	1,578.58	1,566.53	5.18	5.61	92.75	-29.64	-221.60	214.43	204.07	10.36	20.693		
1,700.00	1,696.91	1,677.50	1,664.23	5.53	6.01	92.89	-32.33	-236.84	229.08	218.01	11.07	20.695		
1,800.00	1,796.67	1,776.42	1,761.93	5.89	6.41	93.03	-35.02	-252.08	243.73	231.95	11.78	20.696		
1,900.00	1,896.43	1,875.34	1,859.63	6.24	6.82	93.14	-37.71	-267.32	258.39	245.90	12.49	20.694		
2,000.00	1,996.18	1,974.26	1,957.34	6.60	7.22	93.25	-40.39	-282.56	273.04	259.84	13.20	20.692		
2,100.00	2,095.94	2,073.18	2,055.04	6.96	7.62	93.34	-43.08	-297.80	287.69	273.79	13.91	20.689		
2,200.00	2,195.70	2,172.09	2,152.74	7.31	8.03	93.42	-45.77	-313.04	302.35	287.73	14.62	20.685		
2,300.00	2,295.45	2,271.01	2,250.44	7.67	8.43	93.50	-48.45	-328.27	317.01	301.68	15.33	20.681		
2,400.00	2,395.21	2,369.93	2,348.14	8.03	8.84	93.57	-51.14	-343.51	331.66	315.62	16.04	20.677		
2,500.00	2,494.97	2,468.85	2,445.84	8.38	9.24	93.63	-53.83	-358.75	346.32	329.57	16.75	20.672		
2,600.00	2,594.72	2,567.77	2,543.54	8.74	9.65	93.69	-56.51	-373.99	360.98	343.51	17.47	20.668		
2,700.00	2,694.48	2,666.69	2,641.25	9.10	10.05	93.75	-59.20	-389.23	375.64	357.46	18.18	20.663		
2,800.00	2,794.23	2,765.61	2,738.95	9.45	10.46	93.80	-61.89	-404.47	390.29	371.40	18.89	20.659		
2,900.00	2,893.99	2,864.53	2,836.65	9.81	10.86	93.84	-64.58	-419.71	404.95	385.35	19.61	20.655		
3,000.00	2,993.75	2,963.45	2,934.35	10.17	11.27	93.89	-67.26	-434.95	419.61	399.29	20.32	20.650		
3,100.00	3,093.50	3,062.37	3,032.05	10.53	11.67	93.93	-69.95	-450.19	434.27	413.24	21.03	20.646		
3,200.00	3,193.26	3,161.29	3,129.75	10.88	12.08	93.96	-72.64	-465.43	448.93	427.18	21.75	20.642		
3,300.00	3,293.02	3,260.21	3,227.45	11.24	12.48	94.00	-75.32	-480.67	463.59	441.13	22.46	20.638		
3,400.00	3,392.77	3,359.13	3,325.16	11.60	12.89	94.03	-78.01	-495.91	478.25	455.07	23.18	20.634		
3,500.00	3,492.53	3,458.05	3,422.86	11.96	13.29	94.06	-80.70	-511.15	492.91	469.02	23.89	20.630		
3,600.00	3,592.39	3,556.97	3,520.56	12.26	13.70	94.19	-83.39	-526.39	507.44	482.89	24.56	20.663		
3,700.00	3,692.37	3,655.81	3,618.19	12.55	14.11	-75.07	-86.07	-541.61	521.75	496.56	25.20	20.708		
3,800.00	3,792.37	3,754.58	3,715.74	12.83	14.51	-75.77	-88.75	-556.83	536.01	510.19	25.82	20.762		
3,900.00	3,892.37	3,853.35	3,813.30	13.08	14.92	-76.44	-91.44	-572.05	550.34	523.94	26.40	20.846		
4,000.00	3,992.37	3,952.12	3,910.85	13.34	15.32	-77.07	-94.12	-587.26	564.74	537.76	26.99	20.925		
4,100.00	4,092.37	4,050.89	4,008.40	13.60	15.73	-77.68	-96.80	-602.48	579.21	551.63	27.58	21.001		
4,200.00	4,192.37	4,149.66	4,105.95	13.86	16.13	-78.25	-99.49	-617.69	593.74	565.56	28.17	21.073		
4,300.00	4,292.37	4,248.43	4,203.51	14.12	16.54	-78.79	-102.17	-632.91	608.32	579.54	28.77	21.142		
4,400.00	4,392.37	4,347.20	4,301.06	14.39	16.94	-79.31	-104.85	-648.13	622.95	593.58	29.37	21.208		
4,500.00	4,492.37	4,445.96	4,398.61	14.66	17.35	-79.81	-107.53	-663.34	637.63	607.65	29.98	21.270		
4,600.00	4,592.37	4,543.77	4,495.17	14.93	17.73	-80.33	-110.50	-680.15	651.34	620.77	30.57	21.305		
4,700.00	4,692.37	4,640.66	4,641.36	15.21	18.06	-80.72	-112.78	-693.12	661.13	629.97	31.15	21.221		
4,800.00	4,792.37	4,818.47	4,768.94	15.49	18.38	-80.93	-114.10	-700.60	666.75	635.00	31.75	21.003		
4,900.00	4,892.37	4,941.92	4,892.37	15.77	18.67	-80.99	-114.45	-702.55	668.21	635.86	32.34	20.660		
5,000.00	4,992.37	5,041.92	4,992.37	16.05	18.93	-80.99	-114.45	-702.55	668.21	635.30	32.91	20.304		
5,100.00	5,092.01	5,128.03	5,078.27	16.32	19.15	-81.08	-109.84	-702.55	668.03	634.60	33.44	19.979		
5,200.00	5,188.61	5,211.61	5,159.87	16.57	19.36	-81.45	-92.16	-702.55	667.39	633.51	33.87	19.702		
5,300.00	5,278.61	5,295.83	5,238.17	16.79	19.56	-82.09	-61.39	-702.55	666.33	632.08	34.25	19.456		
5,400.00	5,358.71	5,381.06	5,311.31	17.01	19.74	-82.99	-17.83	-702.55	664.99	630.38	34.61	19.215		
5,500.00	5,425.97	5,467.67	5,377.36	17.24	19.90	-84.11	38.03	-702.55	663.52	628.51	35.01	18.953		
5,600.00	5,477.90	5,556.09	5,434.31	17.52	20.03	-85.43	105.54	-702.55	662.10	626.60	35.50	18.651		
5,700.00	5,512.61	5,646.77	5,480.00	17.86	20.15	-86.92	183.73	-702.55	660.93	624.82	36.11	18.303		
5,800.00	5,528.82	5,740.18	5,512.17	18.27	20.27	-88.53	271.30	-702.55	660.16	623.31	36.85	17.915		
5,900.00	5,530.00	5,837.32	5,528.50	18.76	20.44	-89.87	366.92	-702.55	659.94	622.21	37.72	17.495		
6,000.00	5,530.00	5,937.25	5,530.00	19.35	20.70	-90.00	466.80	-702.55	659.93	621.11	38.82	17.001		
6,100.00	5,530.00	6,037.25	5,530.00	20.03	21.13	-90.00	566.80	-702.55	659.93	619.83	40.10	16.459		
6,200.00	5,530.00	6,137.25	5,530.00	20.79	21.70	-90.00	666.80	-702.55	659.92	618.38	41.54	15.885		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



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Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
6,300.00	5,530.00	6,237.25	5,530.00	21.63	22.38	-90.00	766.80	-702.56	659.92	616.77	43.14	15.296		
6,400.00	5,530.00	6,337.25	5,530.00	22.53	23.16	-90.00	866.80	-702.56	659.91	615.03	44.88	14.704		
6,500.00	5,530.00	6,437.25	5,530.00	23.49	24.02	-90.00	966.80	-702.56	659.91	613.17	46.74	14.119		
6,600.00	5,530.00	6,537.25	5,530.00	24.50	24.94	-90.00	1,066.80	-702.56	659.91	611.20	48.70	13.550		
6,700.00	5,530.00	6,637.25	5,530.00	25.55	25.92	-90.00	1,166.80	-702.56	659.90	609.14	50.76	13.000		
6,800.00	5,530.00	6,737.25	5,530.00	26.65	26.94	-90.00	1,266.80	-702.56	659.90	606.99	52.90	12.473		
6,900.00	5,530.00	6,837.25	5,530.00	27.77	28.00	-90.00	1,366.80	-702.56	659.90	604.77	55.12	11.972		
7,000.00	5,530.00	6,937.25	5,530.00	28.93	29.10	-90.00	1,466.80	-702.56	659.89	602.49	57.40	11.496		
7,100.00	5,530.00	7,037.25	5,530.00	30.12	30.23	-90.00	1,566.80	-702.56	659.89	600.14	59.74	11.045		
7,200.00	5,530.00	7,137.25	5,530.00	31.33	31.39	-90.00	1,666.80	-702.56	659.88	597.75	62.14	10.620		
7,300.00	5,530.00	7,237.25	5,530.00	32.57	32.58	-90.00	1,766.80	-702.56	659.88	595.31	64.57	10.219		
7,400.00	5,530.00	7,337.25	5,530.00	33.82	33.79	-90.00	1,866.80	-702.56	659.88	592.83	67.05	9.841		
7,500.00	5,530.00	7,437.25	5,530.00	35.09	35.01	-90.00	1,966.80	-702.56	659.87	590.31	69.56	9.486		
7,600.00	5,530.00	7,537.25	5,530.00	36.37	36.26	-90.00	2,066.80	-702.56	659.87	587.76	72.11	9.151		
7,700.00	5,530.00	7,637.25	5,530.00	37.67	37.52	-90.00	2,166.80	-702.56	659.87	585.18	74.69	8.835		
7,800.00	5,530.00	7,737.25	5,530.00	38.98	38.80	-90.00	2,266.80	-702.56	659.86	582.57	77.29	8.538		
7,900.00	5,530.00	7,837.25	5,530.00	40.30	40.09	-90.00	2,366.80	-702.56	659.86	579.94	79.92	8.257		
8,000.00	5,530.00	7,937.25	5,530.00	41.63	41.39	-90.00	2,466.80	-702.56	659.85	577.29	82.56	7.992		
8,100.00	5,530.00	8,037.25	5,530.00	42.97	42.70	-90.00	2,566.80	-702.57	659.85	574.62	85.23	7.742		
8,200.00	5,530.00	8,137.25	5,530.00	44.32	44.03	-90.00	2,666.80	-702.57	659.85	571.93	87.91	7.506		
8,300.00	5,530.00	8,237.25	5,530.00	45.68	45.36	-90.00	2,766.80	-702.57	659.84	569.23	90.61	7.282		
8,400.00	5,530.00	8,337.25	5,530.00	47.04	46.70	-90.00	2,866.80	-702.57	659.84	566.51	93.33	7.070		
8,500.00	5,530.00	8,437.25	5,530.00	48.41	48.05	-90.00	2,966.80	-702.57	659.83	563.78	96.06	6.869		
8,600.00	5,530.00	8,537.25	5,530.00	49.79	49.40	-90.00	3,066.80	-702.57	659.83	561.03	98.80	6.679		
8,700.00	5,530.00	8,637.25	5,530.00	51.17	50.77	-90.00	3,166.80	-702.57	659.83	558.28	101.55	6.497		
8,800.00	5,530.00	8,737.25	5,530.00	52.56	52.13	-90.00	3,266.80	-702.57	659.82	555.51	104.31	6.325		
8,900.00	5,530.00	8,837.25	5,530.00	53.95	53.51	-90.00	3,366.80	-702.57	659.82	552.73	107.09	6.162		
9,000.00	5,530.00	8,937.25	5,530.00	55.34	54.88	-90.00	3,466.80	-702.57	659.82	549.95	109.87	6.006		
9,100.00	5,530.00	9,037.25	5,530.00	56.74	56.27	-90.00	3,566.80	-702.57	659.81	547.15	112.66	5.857		
9,200.00	5,530.00	9,137.25	5,530.00	58.14	57.65	-90.00	3,666.80	-702.57	659.81	544.35	115.45	5.715		
9,300.00	5,530.00	9,237.25	5,530.00	59.55	59.05	-90.00	3,766.80	-702.57	659.80	541.55	118.26	5.579		
9,400.00	5,530.00	9,337.25	5,530.00	60.96	60.44	-90.00	3,866.80	-702.57	659.80	538.73	121.07	5.450		
9,500.00	5,530.00	9,437.25	5,530.00	62.37	61.84	-90.00	3,966.80	-702.57	659.80	535.91	123.89	5.326		
9,600.00	5,530.00	9,537.25	5,530.00	63.78	63.24	-90.00	4,066.80	-702.57	659.79	533.08	126.71	5.207		
9,700.00	5,530.00	9,637.25	5,530.00	65.20	64.65	-90.00	4,166.80	-702.57	659.79	530.25	129.54	5.093		
9,800.00	5,530.00	9,737.25	5,530.00	66.62	66.05	-90.00	4,266.80	-702.58	659.78	527.41	132.37	4.984		
9,900.00	5,530.00	9,837.25	5,530.00	68.04	67.47	-90.00	4,366.80	-702.58	659.78	524.57	135.21	4.880		
10,000.00	5,530.00	9,937.25	5,530.00	69.46	68.88	-90.00	4,466.80	-702.58	659.78	521.73	138.05	4.779		
10,100.00	5,530.00	10,037.25	5,530.00	70.89	70.29	-90.00	4,566.80	-702.58	659.77	518.88	140.90	4.683		
10,200.00	5,530.00	10,137.25	5,530.00	72.32	71.71	-90.00	4,666.80	-702.58	659.77	516.02	143.75	4.590		
10,300.00	5,530.00	10,237.25	5,530.00	73.74	73.13	-90.00	4,766.80	-702.58	659.77	513.16	146.60	4.500		
10,400.00	5,530.00	10,337.25	5,530.00	75.18	74.55	-90.00	4,866.80	-702.58	659.76	510.30	149.46	4.414		
10,500.00	5,530.00	10,437.25	5,530.00	76.61	75.98	-90.00	4,966.80	-702.58	659.76	507.44	152.32	4.331		
10,600.00	5,530.00	10,537.25	5,530.00	78.04	77.40	-90.00	5,066.80	-702.58	659.75	504.57	155.18	4.251		
10,700.00	5,530.00	10,637.25	5,530.00	79.48	78.83	-90.00	5,166.80	-702.58	659.75	501.70	158.05	4.174		
10,800.00	5,530.00	10,737.25	5,530.00	80.91	80.26	-90.00	5,266.80	-702.58	659.75	498.83	160.92	4.100		
10,900.00	5,530.00	10,837.25	5,530.00	82.35	81.69	-90.00	5,366.80	-702.58	659.74	495.95	163.79	4.028		
11,000.00	5,530.00	10,937.25	5,530.00	83.79	83.12	-90.00	5,466.80	-702.58	659.74	493.07	166.67	3.958		
11,100.00	5,530.00	11,037.25	5,530.00	85.23	84.55	-90.00	5,566.80	-702.58	659.74	490.19	169.55	3.891		
11,200.00	5,530.00	11,137.25	5,530.00	86.67	85.99	-90.00	5,666.80	-702.58	659.73	487.31	172.42	3.826		
11,300.00	5,530.00	11,237.25	5,530.00	88.11	87.42	-90.00	5,766.80	-702.58	659.73	484.42	175.31	3.763		
11,400.00	5,530.00	11,337.25	5,530.00	89.56	88.86	-90.00	5,866.80	-702.58	659.72	481.53	178.19	3.702		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
11,500.00	5,530.00	11,437.25	5,530.00	91.00	90.30	-90.00	5,966.80	-702.58	659.72	478.65	181.07	3.643		
11,600.00	5,530.00	11,537.25	5,530.00	92.45	91.74	-90.00	6,066.80	-702.59	659.72	475.75	183.96	3.586		
11,700.00	5,530.00	11,637.25	5,530.00	93.89	93.18	-90.00	6,166.80	-702.59	659.71	472.86	186.85	3.531		
11,800.00	5,530.00	11,737.25	5,530.00	95.34	94.62	-90.00	6,266.80	-702.59	659.71	469.97	189.74	3.477		
11,900.00	5,530.00	11,837.25	5,530.00	96.78	96.06	-90.00	6,366.80	-702.59	659.70	467.07	192.63	3.425		
12,000.00	5,530.00	11,937.25	5,530.00	98.23	97.50	-90.00	6,466.80	-702.59	659.70	464.17	195.53	3.374		
12,100.00	5,530.00	12,037.25	5,530.00	99.68	98.95	-90.00	6,566.80	-702.59	659.70	461.27	198.42	3.325		
12,200.00	5,530.00	12,137.25	5,530.00	101.13	100.39	-90.00	6,666.80	-702.59	659.69	458.37	201.32	3.277		
12,300.00	5,530.00	12,237.25	5,530.00	102.58	101.84	-90.00	6,766.80	-702.59	659.69	455.47	204.22	3.230		
12,400.00	5,530.00	12,337.25	5,530.00	104.03	103.28	-90.00	6,866.80	-702.59	659.69	452.57	207.12	3.185		
12,500.00	5,530.00	12,437.25	5,530.00	105.48	104.73	-90.00	6,966.80	-702.59	659.68	449.66	210.02	3.141		
12,600.00	5,530.00	12,537.25	5,530.00	106.93	106.18	-90.00	7,066.80	-702.59	659.68	446.76	212.92	3.098		
12,700.00	5,530.00	12,637.25	5,530.00	108.39	107.63	-90.00	7,166.80	-702.59	659.67	443.85	215.82	3.057		
12,800.00	5,530.00	12,737.25	5,530.00	109.84	109.07	-90.00	7,266.80	-702.59	659.67	440.94	218.73	3.016		
12,900.00	5,530.00	12,837.25	5,530.00	111.29	110.52	-90.00	7,366.80	-702.59	659.67	438.04	221.63	2.976		
13,000.00	5,530.00	12,937.25	5,530.00	112.75	111.97	-90.00	7,466.80	-702.59	659.66	435.13	224.54	2.938		
13,100.00	5,530.00	13,037.25	5,530.00	114.20	113.42	-90.00	7,566.80	-702.59	659.66	432.22	227.44	2.900		
13,200.00	5,530.00	13,137.25	5,530.00	115.65	114.87	-90.00	7,666.80	-702.59	659.66	429.30	230.35	2.864		
13,300.00	5,530.00	13,237.25	5,530.00	117.11	116.33	-90.00	7,766.80	-702.59	659.65	426.39	233.26	2.828		
13,400.00	5,530.00	13,337.25	5,530.00	118.57	117.78	-90.00	7,866.80	-702.60	659.65	423.48	236.17	2.793		
13,500.00	5,530.00	13,437.25	5,530.00	120.02	119.23	-90.00	7,966.80	-702.60	659.64	420.56	239.08	2.759		
13,600.00	5,530.00	13,537.25	5,530.00	121.48	120.68	-90.00	8,066.80	-702.60	659.64	417.65	241.99	2.726		
13,700.00	5,530.00	13,637.25	5,530.00	122.93	122.14	-90.00	8,166.80	-702.60	659.64	414.73	244.90	2.693		
13,800.00	5,530.00	13,737.25	5,530.00	124.39	123.59	-90.00	8,266.80	-702.60	659.63	411.82	247.82	2.662		
13,900.00	5,530.00	13,837.25	5,530.00	125.85	125.05	-90.00	8,366.80	-702.60	659.63	408.90	250.73	2.631		
14,000.00	5,530.00	13,937.25	5,530.00	127.31	126.50	-90.00	8,466.80	-702.60	659.62	405.98	253.64	2.601		
14,100.00	5,530.00	14,037.25	5,530.00	128.76	127.95	-90.00	8,566.80	-702.60	659.62	403.06	256.56	2.571		
14,200.00	5,530.00	14,137.25	5,530.00	130.22	129.41	-90.00	8,666.80	-702.60	659.62	400.14	259.47	2.542		
14,300.00	5,530.00	14,237.25	5,530.00	131.68	130.87	-90.00	8,766.80	-702.60	659.61	397.22	262.39	2.514		
14,400.00	5,530.00	14,337.25	5,530.00	133.14	132.32	-90.00	8,866.80	-702.60	659.61	394.30	265.31	2.486		
14,500.00	5,530.00	14,437.25	5,530.00	134.60	133.78	-90.00	8,966.80	-702.60	659.61	391.38	268.22	2.459		
14,600.00	5,530.00	14,537.25	5,530.00	136.06	135.24	-90.00	9,066.80	-702.60	659.60	388.46	271.14	2.433		
14,700.00	5,530.00	14,637.25	5,530.00	137.52	136.69	-90.00	9,166.80	-702.60	659.60	385.54	274.06	2.407		
14,800.00	5,530.00	14,737.25	5,530.00	138.98	138.15	-90.00	9,266.80	-702.60	659.59	382.62	276.98	2.381		
14,900.00	5,530.00	14,837.25	5,530.00	140.44	139.61	-90.00	9,366.80	-702.60	659.59	379.69	279.90	2.357		
15,000.00	5,530.00	14,937.25	5,530.00	141.90	141.07	-90.00	9,466.80	-702.60	659.59	376.77	282.82	2.332		
15,100.00	5,530.00	15,037.25	5,530.00	143.36	142.52	-90.00	9,566.80	-702.60	659.58	373.84	285.74	2.308		
15,200.00	5,530.00	15,137.25	5,530.00	144.82	143.98	-90.00	9,666.80	-702.61	659.58	370.92	288.66	2.285		
15,300.00	5,530.00	15,237.25	5,530.00	146.28	145.44	-90.00	9,766.80	-702.61	659.57	367.99	291.58	2.262		
15,400.00	5,530.00	15,337.25	5,530.00	147.74	146.90	-90.00	9,866.80	-702.61	659.57	365.07	294.50	2.240		
15,500.00	5,530.00	15,437.25	5,530.00	149.20	148.36	-90.00	9,966.80	-702.61	659.57	362.14	297.42	2.218		
15,600.00	5,530.00	15,537.25	5,530.00	150.67	149.82	-90.00	10,066.80	-702.61	659.56	359.22	300.35	2.196		
15,665.70	5,530.00	15,602.95	5,530.00	151.63	150.78	-90.00	10,132.50	-702.61	659.56	357.29	302.27	2.182		
15,691.20	5,530.00	15,626.44	5,530.00	152.00	151.12	-90.00	10,155.99	-702.61	659.56	356.58	302.98	2.177 SF		



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-90.00	0.00	-29.22	29.22					
100.00	100.00	100.00	100.00	0.13	0.13	-90.00	0.00	-29.22	29.22	28.96	0.27	109.719		
200.00	200.00	200.00	200.00	0.47	0.47	-90.00	0.00	-29.22	29.22	28.28	0.94	31.067		
300.00	300.00	300.00	300.00	0.81	0.81	-90.00	0.00	-29.22	29.22	27.61	1.61	18.096 CC, ES		
400.00	399.98	399.02	399.00	1.11	1.12	81.06	-0.59	-30.83	30.53	28.31	2.22	13.735		
500.00	499.84	497.87	497.71	1.41	1.43	86.26	-2.34	-35.64	34.67	31.85	2.82	12.288		
600.00	599.59	597.00	596.51	1.72	1.76	90.60	-5.13	-43.32	41.66	38.20	3.47	12.021		
700.00	699.35	696.69	696.82	2.04	2.09	93.39	-8.10	-51.48	49.22	45.10	4.12	11.942		
800.00	799.11	796.38	795.13	2.37	2.44	95.43	-11.07	-59.65	56.86	52.07	4.79	11.862		
900.00	898.86	896.07	894.44	2.72	2.79	96.99	-14.04	-67.81	64.56	59.08	5.48	11.791		
1,000.00	998.62	995.76	993.75	3.06	3.15	98.21	-17.02	-75.98	72.29	66.12	6.16	11.728		
1,100.00	1,098.38	1,095.45	1,093.06	3.41	3.50	99.20	-19.99	-84.14	80.05	73.19	6.86	11.673		
1,200.00	1,198.13	1,195.14	1,192.37	3.76	3.86	100.01	-22.96	-92.30	87.83	80.27	7.55	11.626		
1,300.00	1,297.89	1,294.83	1,291.68	4.12	4.22	100.69	-25.93	-100.47	95.62	87.37	8.25	11.585		
1,400.00	1,397.65	1,394.52	1,390.99	4.47	4.58	101.27	-28.90	-108.63	103.43	94.47	8.96	11.549		
1,500.00	1,497.40	1,494.21	1,490.30	4.82	4.94	101.76	-31.87	-116.80	111.24	101.58	9.66	11.517		
1,600.00	1,597.16	1,593.90	1,589.61	5.18	5.30	102.19	-34.85	-124.96	119.06	108.70	10.36	11.489		
1,700.00	1,696.91	1,693.59	1,688.92	5.53	5.66	102.57	-37.82	-133.13	126.89	115.82	11.07	11.464		
1,800.00	1,796.67	1,793.28	1,788.24	5.89	6.02	102.91	-40.79	-141.29	134.72	122.95	11.77	11.441		
1,900.00	1,896.43	1,892.97	1,887.55	6.24	6.38	103.20	-43.76	-149.46	142.56	130.07	12.48	11.421		
2,000.00	1,996.18	1,992.66	1,986.86	6.60	6.74	103.47	-46.73	-157.62	150.40	137.21	13.19	11.403		
2,100.00	2,095.94	2,092.35	2,086.17	6.96	7.10	103.71	-49.70	-165.79	158.24	144.34	13.90	11.387		
2,200.00	2,195.70	2,192.04	2,185.48	7.31	7.46	103.93	-52.68	-173.95	166.08	151.48	14.61	11.371		
2,300.00	2,295.45	2,291.73	2,284.79	7.67	7.82	104.13	-55.65	-182.11	173.93	158.62	15.31	11.358		
2,400.00	2,395.21	2,391.42	2,384.10	8.03	8.19	104.31	-58.62	-190.28	181.78	165.76	16.02	11.345		
2,500.00	2,494.97	2,491.11	2,483.41	8.38	8.55	104.47	-61.59	-198.44	189.63	172.90	16.73	11.333		
2,600.00	2,594.72	2,590.80	2,582.72	8.74	8.91	104.62	-64.56	-206.61	197.48	180.04	17.44	11.322		
2,700.00	2,694.48	2,690.49	2,682.03	9.10	9.27	104.77	-67.53	-214.77	205.33	187.18	18.15	11.312		
2,800.00	2,794.23	2,790.18	2,781.34	9.45	9.63	104.90	-70.51	-222.94	213.19	194.33	18.86	11.303		
2,900.00	2,893.99	2,889.87	2,880.65	9.81	10.00	105.02	-73.48	-231.10	221.04	201.47	19.57	11.294		
3,000.00	2,993.75	2,989.56	2,979.96	10.17	10.36	105.13	-76.45	-239.27	228.90	208.62	20.28	11.286		
3,100.00	3,093.50	3,089.25	3,079.27	10.53	10.72	105.24	-79.42	-247.43	236.76	215.77	20.99	11.278		
3,200.00	3,193.26	3,188.94	3,178.58	10.88	11.08	105.33	-82.39	-255.60	244.62	222.91	21.70	11.271		
3,300.00	3,293.02	3,288.63	3,277.89	11.24	11.45	105.43	-85.36	-263.76	252.48	230.06	22.41	11.265		
3,400.00	3,392.77	3,388.32	3,377.20	11.60	11.81	105.51	-88.34	-271.92	260.33	237.21	23.12	11.258		
3,500.00	3,492.53	3,488.01	3,476.51	11.96	12.17	105.60	-91.31	-280.09	268.19	244.36	23.83	11.252		
3,600.00	3,592.39	3,587.72	3,575.85	12.26	12.53	105.47	-94.28	-288.26	275.59	251.09	24.50	11.251		
3,700.00	3,692.37	3,687.40	3,675.15	12.55	12.90	-64.35	-97.25	-296.42	282.09	256.96	25.13	11.223		
3,800.00	3,792.37	3,787.02	3,774.39	12.83	13.26	-65.59	-100.22	-304.58	288.27	262.50	25.76	11.189		
3,900.00	3,892.37	3,886.64	3,873.63	13.08	13.62	-66.77	-103.19	-312.74	294.57	268.21	26.36	11.176		
4,000.00	3,992.37	3,986.26	3,972.87	13.34	13.98	-67.91	-106.16	-320.90	300.99	274.04	26.95	11.167		
4,100.00	4,092.37	4,085.88	4,072.11	13.60	14.35	-68.99	-109.13	-329.05	307.52	279.97	27.55	11.162		
4,200.00	4,192.37	4,185.50	4,171.35	13.86	14.71	-70.04	-112.10	-337.21	314.16	286.01	28.15	11.160		
4,300.00	4,292.37	4,285.12	4,270.59	14.12	15.07	-71.03	-115.07	-345.37	320.90	292.15	28.75	11.161		
4,400.00	4,392.37	4,384.74	4,369.83	14.39	15.43	-71.99	-118.04	-353.53	327.73	298.37	29.36	11.163		
4,500.00	4,492.37	4,484.36	4,469.07	14.66	15.80	-72.91	-121.01	-361.69	334.65	304.69	29.96	11.168		
4,600.00	4,592.37	4,582.90	4,567.31	14.93	16.14	-73.72	-123.73	-369.17	340.56	310.00	30.56	11.145		
4,700.00	4,692.37	4,683.52	4,667.85	15.21	16.41	-74.10	-125.07	-372.86	343.43	312.32	31.10	11.041		
4,800.00	4,792.37	4,783.03	4,767.37	15.49	16.70	-74.14	-125.20	-373.21	343.70	312.03	31.67	10.851		
4,900.00	4,892.37	4,883.03	4,867.37	15.77	16.97	-74.14	-125.20	-373.21	343.70	311.47	32.23	10.663		
5,000.00	4,992.37	4,983.03	4,967.37	16.05	17.25	-74.14	-125.20	-373.21	343.70	310.91	32.80	10.480		
5,100.00	5,092.01	5,083.03	5,067.30	16.32	17.52	-75.28	-124.95	-373.21	342.02	308.69	33.33	10.262		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	Hz	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,200.00	5,188.61	5,190.67	5,174.36	16.57	17.76	-77.64	-115.27	-373.21	338.66	304.92	33.74	10.037		
5,300.00	5,278.61	5,278.30	5,258.48	16.79	17.99	-80.44	-91.11	-373.21	335.42	301.31	34.11	9.833		
5,400.00	5,358.71	5,368.33	5,339.44	17.01	18.20	-83.62	-51.98	-373.21	332.76	298.25	34.50	9.645		
5,500.00	5,425.97	5,461.30	5,414.69	17.24	18.40	-87.09	2.42	-373.21	331.06	296.12	34.93	9.477		
5,580.77	5,469.20	5,538.92	5,469.29	17.46	18.53	-90.02	57.48	-373.21	330.60	295.28	35.32	9.359		
5,600.00	5,477.90	5,557.77	5,481.26	17.52	18.56	-90.72	72.04	-373.21	330.63	295.21	35.42	9.335		
5,700.00	5,512.61	5,658.32	5,535.77	17.86	18.68	-94.40	156.35	-373.20	331.62	295.67	35.95	9.225		
5,800.00	5,528.82	5,763.47	5,574.36	18.27	18.77	-97.97	253.97	-373.20	333.95	297.43	36.53	9.142		
5,900.00	5,530.00	5,874.13	5,592.97	18.76	19.15	-100.79	362.84	-373.20	336.54	299.30	37.25	9.035		
6,000.00	5,530.00	5,978.13	5,594.00	19.35	19.70	-100.96	466.82	-373.19	336.71	298.37	38.33	8.783		
6,100.00	5,530.00	6,078.13	5,594.00	20.03	20.32	-100.96	566.82	-373.19	336.70	297.10	39.60	8.503		
6,200.00	5,530.00	6,178.13	5,594.00	20.79	21.03	-100.96	666.82	-373.19	336.69	295.67	41.02	8.207		
6,300.00	5,530.00	6,278.13	5,594.00	21.63	21.80	-100.96	766.82	-373.18	336.68	294.08	42.60	7.903		
6,400.00	5,530.00	6,378.13	5,594.00	22.53	22.65	-100.96	866.82	-373.18	336.68	292.36	44.31	7.598		
6,500.00	5,530.00	6,478.13	5,594.00	23.49	23.56	-100.96	966.82	-373.17	336.67	290.53	46.14	7.296		
6,600.00	5,530.00	6,578.13	5,594.00	24.50	24.52	-100.96	1,066.82	-373.17	336.66	288.58	48.08	7.003		
6,700.00	5,530.00	6,678.13	5,594.00	25.55	25.53	-100.96	1,166.82	-373.17	336.65	286.55	50.10	6.719		
6,800.00	5,530.00	6,778.13	5,594.00	26.65	26.58	-100.96	1,266.82	-373.16	336.64	284.43	52.21	6.447		
6,900.00	5,530.00	6,878.13	5,594.00	27.77	27.67	-100.96	1,366.82	-373.16	336.64	282.24	54.40	6.189		
7,000.00	5,530.00	6,978.13	5,594.00	28.93	28.80	-100.96	1,466.82	-373.15	336.63	279.99	56.64	5.943		
7,100.00	5,530.00	7,078.13	5,594.00	30.12	29.95	-100.96	1,566.82	-373.15	336.62	277.67	58.95	5.711		
7,200.00	5,530.00	7,178.13	5,594.00	31.33	31.13	-100.96	1,666.82	-373.15	336.61	275.31	61.30	5.491		
7,300.00	5,530.00	7,278.13	5,594.00	32.57	32.33	-100.96	1,766.82	-373.14	336.60	272.90	63.70	5.284		
7,400.00	5,530.00	7,378.13	5,594.00	33.82	33.56	-100.96	1,866.82	-373.14	336.60	270.46	66.14	5.089		
7,500.00	5,530.00	7,478.13	5,594.00	35.09	34.80	-100.96	1,966.82	-373.14	336.59	267.98	68.61	4.906		
7,600.00	5,530.00	7,578.13	5,594.00	36.37	36.07	-100.96	2,066.82	-373.13	336.58	265.46	71.12	4.733		
7,700.00	5,530.00	7,678.13	5,594.00	37.67	37.34	-100.96	2,166.82	-373.13	336.57	262.92	73.66	4.570		
7,800.00	5,530.00	7,778.13	5,594.00	38.98	38.63	-100.96	2,266.82	-373.12	336.56	260.35	76.22	4.416		
7,900.00	5,530.00	7,878.13	5,594.00	40.30	39.94	-100.96	2,366.82	-373.12	336.56	257.75	78.80	4.271		
8,000.00	5,530.00	7,978.13	5,594.00	41.63	41.25	-100.96	2,466.82	-373.12	336.55	255.14	81.41	4.134		
8,100.00	5,530.00	8,078.13	5,594.00	42.97	42.58	-100.96	2,566.82	-373.11	336.54	252.51	84.03	4.005		
8,200.00	5,530.00	8,178.13	5,594.00	44.32	43.91	-100.96	2,666.82	-373.11	336.53	249.86	86.68	3.883		
8,300.00	5,530.00	8,278.13	5,594.00	45.68	45.25	-100.96	2,766.82	-373.11	336.52	247.19	89.33	3.767		
8,400.00	5,530.00	8,378.13	5,594.00	47.04	46.60	-100.96	2,866.82	-373.10	336.52	244.51	92.01	3.658		
8,500.00	5,530.00	8,478.13	5,594.00	48.41	47.96	-100.97	2,966.82	-373.10	336.51	241.82	94.69	3.554		
8,600.00	5,530.00	8,578.13	5,594.00	49.79	49.32	-100.97	3,066.82	-373.09	336.50	239.11	97.39	3.455		
8,700.00	5,530.00	8,678.13	5,594.00	51.17	50.69	-100.97	3,166.82	-373.09	336.49	236.39	100.10	3.362		
8,800.00	5,530.00	8,778.13	5,594.00	52.56	52.07	-100.97	3,266.82	-373.09	336.48	233.67	102.82	3.273		
8,900.00	5,530.00	8,878.13	5,594.00	53.95	53.45	-100.97	3,366.82	-373.08	336.48	230.93	105.55	3.188		
9,000.00	5,530.00	8,978.13	5,594.00	55.34	54.83	-100.97	3,466.82	-373.08	336.47	228.18	108.29	3.107		
9,100.00	5,530.00	9,078.13	5,594.00	56.74	56.22	-100.97	3,566.82	-373.08	336.46	225.43	111.03	3.030		
9,200.00	5,530.00	9,178.13	5,594.00	58.14	57.62	-100.97	3,666.82	-373.07	336.45	222.67	113.79	2.957		
9,300.00	5,530.00	9,278.13	5,594.00	59.55	59.01	-100.97	3,766.82	-373.07	336.44	219.90	116.55	2.887		
9,400.00	5,530.00	9,378.13	5,594.00	60.96	60.42	-100.97	3,866.82	-373.06	336.44	217.12	119.31	2.820		
9,500.00	5,530.00	9,478.13	5,594.00	62.37	61.82	-100.97	3,966.82	-373.06	336.43	214.34	122.09	2.756		
9,600.00	5,530.00	9,578.13	5,594.00	63.78	63.23	-100.97	4,066.82	-373.06	336.42	211.55	124.87	2.694		
9,700.00	5,530.00	9,678.13	5,594.00	65.20	64.64	-100.97	4,166.82	-373.05	336.41	208.76	127.65	2.635		
9,800.00	5,530.00	9,778.13	5,594.00	66.62	66.05	-100.97	4,266.82	-373.05	336.40	205.97	130.44	2.579		
9,900.00	5,530.00	9,878.13	5,594.00	68.04	67.47	-100.97	4,366.82	-373.05	336.40	203.16	133.23	2.525		
10,000.00	5,530.00	9,978.13	5,594.00	69.46	68.88	-100.97	4,466.82	-373.04	336.39	200.36	136.03	2.473		
10,100.00	5,530.00	10,078.13	5,594.00	70.89	70.30	-100.97	4,566.82	-373.04	336.38	197.55	138.83	2.423		
10,200.00	5,530.00	10,178.13	5,594.00	72.32	71.73	-100.97	4,666.82	-373.03	336.37	194.73	141.64	2.375		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,300.00	5,530.00	10,278.13	5,594.00	73.74	73.15	-100.97	4,766.82	-373.03	336.36	191.92	144.45	2.329	
10,400.00	5,530.00	10,378.13	5,594.00	75.18	74.58	-100.97	4,866.82	-373.03	336.36	189.09	147.26	2.284	
10,500.00	5,530.00	10,478.13	5,594.00	76.61	76.00	-100.97	4,966.82	-373.02	336.35	186.27	150.08	2.241	
10,600.00	5,530.00	10,578.13	5,594.00	78.04	77.43	-100.97	5,066.82	-373.02	336.34	183.44	152.90	2.200	
10,700.00	5,530.00	10,678.13	5,594.00	79.48	78.86	-100.97	5,166.82	-373.02	336.33	180.61	155.72	2.160	
10,800.00	5,530.00	10,778.13	5,594.00	80.91	80.29	-100.97	5,266.82	-373.01	336.33	177.78	158.55	2.121	
10,900.00	5,530.00	10,878.13	5,594.00	82.35	81.73	-100.97	5,366.82	-373.01	336.32	174.94	161.37	2.084	
11,000.00	5,530.00	10,978.13	5,594.00	83.79	83.16	-100.97	5,466.82	-373.00	336.31	172.11	164.20	2.048	
11,100.00	5,530.00	11,078.13	5,594.00	85.23	84.60	-100.97	5,566.82	-373.00	336.30	169.27	167.04	2.013	
11,200.00	5,530.00	11,178.13	5,594.00	86.67	86.04	-100.97	5,666.82	-373.00	336.29	166.42	169.87	1.980	
11,300.00	5,530.00	11,278.13	5,594.00	88.11	87.48	-100.97	5,766.82	-372.99	336.29	163.58	172.71	1.947	
11,400.00	5,530.00	11,378.13	5,594.00	89.56	88.92	-100.97	5,866.82	-372.99	336.28	160.73	175.55	1.916	
11,500.00	5,530.00	11,478.13	5,594.00	91.00	90.36	-100.97	5,966.82	-372.99	336.27	157.88	178.39	1.885	
11,600.00	5,530.00	11,578.13	5,594.00	92.45	91.80	-100.97	6,066.82	-372.98	336.26	155.03	181.23	1.855	
11,700.00	5,530.00	11,678.13	5,594.00	93.89	93.24	-100.97	6,166.82	-372.98	336.25	152.18	184.07	1.827	
11,800.00	5,530.00	11,778.13	5,594.00	95.34	94.68	-100.97	6,266.82	-372.97	336.25	149.33	186.92	1.799	
11,900.00	5,530.00	11,878.13	5,594.00	96.78	96.13	-100.97	6,366.82	-372.97	336.24	146.47	189.77	1.772	
12,000.00	5,530.00	11,978.13	5,594.00	98.23	97.57	-100.97	6,466.82	-372.97	336.23	143.61	192.61	1.746	
12,100.00	5,530.00	12,078.13	5,594.00	99.68	99.02	-100.97	6,566.82	-372.96	336.22	140.76	195.47	1.720	
12,200.00	5,530.00	12,178.13	5,594.00	101.13	100.47	-100.97	6,666.82	-372.96	336.21	137.90	198.32	1.695	
12,300.00	5,530.00	12,278.13	5,594.00	102.58	101.91	-100.98	6,766.82	-372.96	336.21	135.04	201.17	1.671	
12,400.00	5,530.00	12,378.13	5,594.00	104.03	103.36	-100.98	6,866.82	-372.95	336.20	132.17	204.02	1.648	
12,500.00	5,530.00	12,478.13	5,594.00	105.48	104.81	-100.98	6,966.82	-372.95	336.19	129.31	206.88	1.625	
12,600.00	5,530.00	12,578.13	5,594.00	106.93	106.26	-100.98	7,066.82	-372.94	336.18	126.45	209.74	1.603	
12,700.00	5,530.00	12,678.13	5,594.00	108.39	107.71	-100.98	7,166.82	-372.94	336.17	123.58	212.59	1.581	
12,800.00	5,530.00	12,778.13	5,594.00	109.84	109.16	-100.98	7,266.82	-372.94	336.17	120.71	215.45	1.560	
12,900.00	5,530.00	12,878.13	5,594.00	111.29	110.61	-100.98	7,366.82	-372.93	336.16	117.84	218.31	1.540	
13,000.00	5,530.00	12,978.13	5,594.00	112.75	112.06	-100.98	7,466.82	-372.93	336.15	114.98	221.17	1.520	
13,100.00	5,530.00	13,078.13	5,594.00	114.20	113.52	-100.98	7,566.82	-372.93	336.14	112.11	224.04	1.500	
13,200.00	5,530.00	13,178.13	5,594.00	115.65	114.97	-100.98	7,666.82	-372.92	336.13	109.24	226.90	1.481 Level 3	
13,300.00	5,530.00	13,278.13	5,594.00	117.11	116.42	-100.98	7,766.82	-372.92	336.13	106.36	229.76	1.463 Level 3	
13,400.00	5,530.00	13,378.13	5,594.00	118.57	117.87	-100.98	7,866.82	-372.91	336.12	103.49	232.63	1.445 Level 3	
13,500.00	5,530.00	13,478.13	5,594.00	120.02	119.33	-100.98	7,966.82	-372.91	336.11	100.62	235.49	1.427 Level 3	
13,600.00	5,530.00	13,578.13	5,594.00	121.48	120.78	-100.98	8,066.82	-372.91	336.10	97.74	238.36	1.410 Level 3	
13,700.00	5,530.00	13,678.13	5,594.00	122.93	122.24	-100.98	8,166.82	-372.90	336.09	94.87	241.22	1.393 Level 3	
13,800.00	5,530.00	13,778.13	5,594.00	124.39	123.69	-100.98	8,266.82	-372.90	336.09	91.99	244.09	1.377 Level 3	
13,900.00	5,530.00	13,878.13	5,594.00	125.85	125.15	-100.98	8,366.82	-372.90	336.08	89.12	246.96	1.361 Level 3	
14,000.00	5,530.00	13,978.13	5,594.00	127.31	126.60	-100.98	8,466.82	-372.89	336.07	86.24	249.83	1.345 Level 3	
14,100.00	5,530.00	14,078.13	5,594.00	128.76	128.06	-100.98	8,566.82	-372.89	336.06	83.36	252.70	1.330 Level 3	
14,200.00	5,530.00	14,178.13	5,594.00	130.22	129.52	-100.98	8,666.82	-372.88	336.05	80.49	255.57	1.315 Level 3	
14,300.00	5,530.00	14,278.13	5,594.00	131.68	130.98	-100.98	8,766.82	-372.88	336.05	77.61	258.44	1.300 Level 3	
14,400.00	5,530.00	14,378.13	5,594.00	133.14	132.43	-100.98	8,866.82	-372.88	336.04	74.73	261.31	1.286 Level 3	
14,500.00	5,530.00	14,478.13	5,594.00	134.60	133.89	-100.98	8,966.82	-372.87	336.03	71.85	264.18	1.272 Level 3	
14,600.00	5,530.00	14,578.13	5,594.00	136.06	135.35	-100.98	9,066.82	-372.87	336.02	68.97	267.05	1.258 Level 3	
14,700.00	5,530.00	14,678.13	5,594.00	137.52	136.81	-100.98	9,166.82	-372.87	336.01	66.09	269.93	1.245 Level 2	
14,800.00	5,530.00	14,778.13	5,594.00	138.98	138.27	-100.98	9,266.82	-372.86	336.01	63.20	272.80	1.232 Level 2	
14,900.00	5,530.00	14,878.13	5,594.00	140.44	139.72	-100.98	9,366.82	-372.86	336.00	60.32	275.68	1.219 Level 2	
15,000.00	5,530.00	14,978.13	5,594.00	141.90	141.18	-100.98	9,466.82	-372.85	335.99	57.44	278.55	1.206 Level 2	
15,100.00	5,530.00	15,078.13	5,594.00	143.36	142.64	-100.98	9,566.82	-372.85	335.98	54.56	281.43	1.194 Level 2	
15,200.00	5,530.00	15,178.13	5,594.00	144.82	144.10	-100.98	9,666.82	-372.85	335.97	51.67	284.30	1.182 Level 2	
15,300.00	5,530.00	15,278.13	5,594.00	146.28	145.56	-100.98	9,766.82	-372.84	335.97	48.79	287.18	1.170 Level 2	
15,400.00	5,530.00	15,378.13	5,594.00	147.74	147.02	-100.98	9,866.82	-372.84	335.96	45.90	290.05	1.158 Level 2	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	Hz	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design Sec 25-T10N-R58W - Razor #25N-2406 - Hz - APD												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
15,500.00	5,530.00	15,478.13	5,594.00	149.20	148.48	-100.98	9,966.82	-372.84	335.95	43.02	292.93	1.147	Level 2
15,600.00	5,530.00	15,578.13	5,594.00	150.67	149.94	-100.98	10,066.82	-372.83	335.94	40.13	295.81	1.136	Level 2
15,661.65	5,530.00	15,639.78	5,594.00	151.57	150.84	-100.98	10,128.47	-372.83	335.94	38.36	297.58	1.129	Level 2
15,691.20	5,530.00	15,668.31	5,594.00	152.00	151.26	-100.98	10,157.00	-372.83	335.94	37.52	298.42	1.126	Level 2, SF



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Sec 25-T10N-R58W - Razor #25N-2408 - HZ - APD		Offset Site Error:		0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:		0.00 usft		
Reference		Offset		Semi Major Axis		Distance								Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
0.00	0.00	0.00	0.00	0.00	0.00	88.12	1.01	30.76	30.78								
100.00	100.00	100.00	100.00	0.13	0.13	88.12	1.01	30.76	30.78	30.51	0.27	115.556					
200.00	200.00	200.00	200.00	0.47	0.47	88.12	1.01	30.76	30.78	29.84	0.94	32.720					
300.00	300.00	300.00	300.00	0.81	0.81	88.12	1.01	30.76	30.78	29.16	1.61	19.058	CC, ES				
400.00	399.98	399.11	399.09	1.11	1.11	-104.01	0.03	32.17	32.56	30.34	2.22	14.661					
500.00	499.84	498.01	497.86	1.41	1.42	-106.73	-2.91	36.36	37.95	35.14	2.82	13.467					
600.00	599.59	597.12	596.62	1.72	1.75	-108.32	-7.60	43.06	46.22	42.76	3.46	13.367					
700.00	699.35	696.74	695.87	2.04	2.07	-109.09	-12.58	50.17	54.86	50.75	4.11	13.348					
800.00	799.11	796.37	795.11	2.37	2.42	-109.65	-17.56	57.28	63.50	58.72	4.78	13.290					
900.00	898.86	895.99	894.36	2.72	2.77	-110.07	-22.54	64.39	72.15	66.69	5.46	13.222					
1,000.00	998.62	995.62	993.60	3.06	3.12	-110.41	-27.52	71.51	80.80	74.66	6.14	13.154					
1,100.00	1,098.38	1,095.24	1,092.85	3.41	3.47	-110.68	-32.50	78.62	89.45	82.62	6.83	13.090					
1,200.00	1,198.13	1,194.86	1,192.09	3.76	3.83	-110.90	-37.48	85.73	98.11	90.58	7.53	13.033					
1,300.00	1,297.89	1,294.49	1,291.34	4.12	4.19	-111.09	-42.46	92.84	106.76	98.54	8.22	12.981					
1,400.00	1,397.65	1,394.11	1,390.58	4.47	4.55	-111.25	-47.44	99.96	115.42	106.50	8.92	12.934					
1,500.00	1,497.40	1,493.74	1,489.83	4.82	4.91	-111.38	-52.42	107.07	124.08	114.45	9.62	12.892					
1,600.00	1,597.16	1,593.36	1,589.07	5.18	5.26	-111.50	-57.40	114.18	132.74	122.41	10.33	12.854					
1,700.00	1,696.91	1,692.99	1,688.32	5.53	5.62	-111.61	-62.38	121.29	141.40	130.37	11.03	12.820					
1,800.00	1,796.67	1,792.61	1,787.56	5.89	5.98	-111.70	-67.36	128.41	150.06	138.32	11.73	12.789					
1,900.00	1,896.43	1,892.23	1,886.81	6.24	6.35	-111.78	-72.34	135.52	158.72	146.28	12.44	12.761					
2,000.00	1,996.18	1,991.86	1,986.05	6.60	6.71	-111.85	-77.32	142.63	167.38	154.23	13.14	12.735					
2,100.00	2,095.94	2,091.48	2,085.30	6.96	7.07	-111.92	-82.30	149.74	176.04	162.19	13.85	12.712					
2,200.00	2,195.70	2,191.11	2,184.54	7.31	7.43	-111.98	-87.28	156.86	184.70	170.14	14.55	12.690					
2,300.00	2,295.45	2,290.73	2,283.79	7.67	7.79	-112.03	-92.26	163.97	193.36	178.10	15.26	12.670					
2,400.00	2,395.21	2,390.35	2,383.03	8.03	8.15	-112.08	-97.24	171.08	202.02	186.05	15.97	12.652					
2,500.00	2,494.97	2,489.98	2,482.28	8.38	8.51	-112.13	-102.22	178.19	210.68	194.00	16.67	12.635					
2,600.00	2,594.72	2,589.60	2,581.52	8.74	8.87	-112.17	-107.20	185.31	219.34	201.96	17.38	12.619					
2,700.00	2,694.48	2,689.23	2,680.77	9.10	9.24	-112.21	-112.18	192.42	228.00	209.91	18.09	12.604					
2,800.00	2,794.23	2,788.85	2,780.01	9.45	9.60	-112.25	-117.16	199.53	236.66	217.87	18.80	12.590					
2,900.00	2,893.99	2,888.47	2,879.26	9.81	9.96	-112.28	-122.14	206.64	245.33	225.82	19.51	12.577					
3,000.00	2,993.75	2,988.10	2,978.50	10.17	10.32	-112.31	-127.12	213.76	253.99	233.77	20.21	12.565					
3,100.00	3,093.50	3,087.72	3,077.75	10.53	10.68	-112.34	-132.10	220.87	262.65	241.73	20.92	12.554					
3,200.00	3,193.26	3,187.35	3,176.99	10.88	11.04	-112.37	-137.08	227.98	271.31	249.68	21.63	12.543					
3,300.00	3,293.02	3,286.97	3,276.24	11.24	11.41	-112.40	-142.06	235.09	279.97	257.63	22.34	12.533					
3,400.00	3,392.77	3,386.59	3,375.48	11.60	11.77	-112.42	-147.04	242.21	288.63	265.59	23.05	12.524					
3,500.00	3,492.53	3,486.22	3,474.73	11.96	12.13	-112.44	-152.02	249.32	297.30	273.54	23.76	12.515					
3,600.00	3,592.39	3,585.88	3,574.01	12.26	12.49	-112.31	-157.01	256.43	305.30	280.88	24.42	12.503					
3,700.00	3,692.37	3,685.54	3,673.29	12.55	12.86	79.43	-161.99	263.55	312.01	286.95	25.06	12.450					
3,800.00	3,792.37	3,785.16	3,772.53	12.83	13.22	80.55	-166.97	270.66	318.19	292.49	25.69	12.384					
3,900.00	3,892.37	3,884.78	3,871.78	13.08	13.58	81.62	-171.95	277.77	324.48	298.19	26.29	12.342					
4,000.00	3,992.37	3,992.26	3,978.96	13.34	13.92	82.56	-176.47	284.23	329.87	303.00	26.87	12.277					
4,100.00	4,092.37	4,101.57	4,088.19	13.60	14.19	83.02	-178.73	287.46	332.54	305.14	27.40	12.137					
4,200.00	4,192.37	4,205.75	4,192.37	13.86	14.48	83.07	-178.96	287.79	332.82	304.86	27.95	11.906					
4,300.00	4,292.37	4,305.75	4,292.37	14.12	14.75	83.07	-178.96	287.79	332.82	304.33	28.49	11.682					
4,400.00	4,392.37	4,405.75	4,392.37	14.39	15.02	83.07	-178.96	287.79	332.82	303.79	29.03	11.465					
4,500.00	4,492.37	4,505.75	4,492.37	14.66	15.29	83.07	-178.96	287.79	332.82	303.24	29.58	11.253					
4,600.00	4,592.37	4,605.75	4,592.37	14.93	15.57	83.07	-178.96	287.79	332.82	302.69	30.13	11.047					
4,700.00	4,692.37	4,705.75	4,692.37	15.21	15.85	83.07	-178.96	287.79	332.82	302.13	30.68	10.846					
4,800.00	4,792.37	4,805.75	4,792.37	15.49	16.13	83.07	-178.96	287.79	332.82	301.57	31.25	10.652					
4,900.00	4,892.37	4,905.75	4,892.37	15.77	16.41	83.07	-178.96	287.79	332.82	301.01	31.81	10.462					
5,000.00	4,992.37	5,005.75	4,992.37	16.05	16.70	83.07	-178.96	287.79	332.82	300.44	32.38	10.278					
5,100.00	5,092.01	5,104.25	5,090.86	16.32	16.98	84.20	-178.66	287.79	332.11	299.18	32.93	10.085					

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,200.00	5,188.61	5,198.44	5,184.20	16.57	17.24	86.45	-166.98	287.79	331.03	297.63	33.41	9.909	
5,300.00	5,278.61	5,294.91	5,276.01	16.79	17.49	88.85	-137.83	287.79	330.45	296.61	33.84	9.765	
5,346.28	5,317.10	5,340.41	5,317.09	16.89	17.59	90.00	-118.29	287.79	330.39	296.35	34.04	9.707	
5,400.00	5,358.71	5,393.96	5,363.04	17.01	17.71	91.33	-90.83	287.79	330.48	296.22	34.26	9.647	
5,500.00	5,425.97	5,495.86	5,441.62	17.24	17.91	93.79	-26.22	287.79	331.13	296.45	34.68	9.549	
5,600.00	5,477.90	5,600.78	5,507.82	17.52	18.07	96.14	54.95	287.78	332.33	297.19	35.14	9.456	
5,700.00	5,512.61	5,708.75	5,557.58	17.86	18.22	98.27	150.56	287.78	333.91	298.21	35.70	9.354	
5,800.00	5,528.82	5,819.65	5,587.07	18.27	18.54	100.08	257.25	287.78	335.62	299.25	36.38	9.226	
5,900.00	5,530.00	5,929.60	5,594.00	18.76	19.04	100.96	366.81	287.78	336.54	299.28	37.26	9.032	
6,000.00	5,530.00	6,029.60	5,594.00	19.35	19.59	100.96	466.81	287.77	336.54	298.18	38.36	8.773	
6,100.00	5,530.00	6,129.60	5,594.00	20.03	20.23	100.96	566.81	287.77	336.54	296.90	39.64	8.489	
6,200.00	5,530.00	6,229.60	5,594.00	20.79	20.95	100.96	666.81	287.77	336.54	295.45	41.09	8.191	
6,300.00	5,530.00	6,329.60	5,594.00	21.63	21.75	100.96	766.81	287.76	336.54	293.86	42.68	7.885	
6,400.00	5,530.00	6,429.60	5,594.00	22.53	22.61	100.96	866.81	287.76	336.54	292.14	44.41	7.579	
6,500.00	5,530.00	6,529.60	5,594.00	23.49	23.53	100.96	966.81	287.76	336.55	290.30	46.25	7.277	
6,600.00	5,530.00	6,629.60	5,594.00	24.50	24.51	100.96	1,066.81	287.76	336.55	288.35	48.20	6.983	
6,700.00	5,530.00	6,729.60	5,594.00	25.55	25.53	100.96	1,166.81	287.75	336.55	286.32	50.23	6.700	
6,800.00	5,530.00	6,829.60	5,594.00	26.65	26.60	100.96	1,266.81	287.75	336.55	284.20	52.35	6.429	
6,900.00	5,530.00	6,929.60	5,594.00	27.77	27.70	100.96	1,366.81	287.75	336.55	282.01	54.54	6.171	
7,000.00	5,530.00	7,029.60	5,594.00	28.93	28.83	100.96	1,466.81	287.74	336.55	279.76	56.79	5.926	
7,100.00	5,530.00	7,129.60	5,594.00	30.12	30.00	100.96	1,566.81	287.74	336.55	277.45	59.10	5.694	
7,200.00	5,530.00	7,229.60	5,594.00	31.33	31.19	100.96	1,666.81	287.74	336.56	275.09	61.46	5.476	
7,300.00	5,530.00	7,329.60	5,594.00	32.57	32.40	100.96	1,766.81	287.74	336.56	272.69	63.87	5.270	
7,400.00	5,530.00	7,429.60	5,594.00	33.82	33.63	100.96	1,866.81	287.73	336.56	270.25	66.31	5.076	
7,500.00	5,530.00	7,529.60	5,594.00	35.09	34.89	100.96	1,966.81	287.73	336.56	267.77	68.79	4.893	
7,600.00	5,530.00	7,629.60	5,594.00	36.37	36.15	100.96	2,066.81	287.73	336.56	265.27	71.30	4.721	
7,700.00	5,530.00	7,729.60	5,594.00	37.67	37.44	100.96	2,166.81	287.72	336.56	262.73	73.83	4.558	
7,800.00	5,530.00	7,829.60	5,594.00	38.98	38.73	100.96	2,266.81	287.72	336.57	260.17	76.40	4.406	
7,900.00	5,530.00	7,929.60	5,594.00	40.30	40.04	100.96	2,366.81	287.72	336.57	257.58	78.98	4.261	
8,000.00	5,530.00	8,029.60	5,594.00	41.63	41.36	100.96	2,466.81	287.72	336.57	254.98	81.59	4.125	
8,100.00	5,530.00	8,129.60	5,594.00	42.97	42.69	100.96	2,566.81	287.71	336.57	252.36	84.21	3.997	
8,200.00	5,530.00	8,229.60	5,594.00	44.32	44.03	100.96	2,666.81	287.71	336.57	249.71	86.86	3.875	
8,300.00	5,530.00	8,329.60	5,594.00	45.68	45.38	100.96	2,766.81	287.71	336.57	247.06	89.52	3.760	
8,400.00	5,530.00	8,429.60	5,594.00	47.04	46.73	100.96	2,866.81	287.71	336.57	244.39	92.19	3.651	
8,500.00	5,530.00	8,529.60	5,594.00	48.41	48.09	100.96	2,966.81	287.70	336.58	241.70	94.88	3.548	
8,600.00	5,530.00	8,629.60	5,594.00	49.79	49.46	100.96	3,066.81	287.70	336.58	239.00	97.57	3.449	
8,700.00	5,530.00	8,729.60	5,594.00	51.17	50.83	100.96	3,166.81	287.70	336.58	236.30	100.28	3.356	
8,800.00	5,530.00	8,829.60	5,594.00	52.56	52.21	100.96	3,266.81	287.69	336.58	233.58	103.00	3.268	
8,900.00	5,530.00	8,929.60	5,594.00	53.95	53.60	100.96	3,366.81	287.69	336.58	230.85	105.73	3.183	
9,000.00	5,530.00	9,029.60	5,594.00	55.34	54.98	100.96	3,466.81	287.69	336.58	228.12	108.47	3.103	
9,100.00	5,530.00	9,129.60	5,594.00	56.74	56.38	100.96	3,566.81	287.69	336.59	225.37	111.21	3.027	
9,200.00	5,530.00	9,229.60	5,594.00	58.14	57.77	100.96	3,666.81	287.68	336.59	222.62	113.97	2.953	
9,300.00	5,530.00	9,329.60	5,594.00	59.55	59.17	100.96	3,766.81	287.68	336.59	219.86	116.72	2.884	
9,400.00	5,530.00	9,429.60	5,594.00	60.96	60.58	100.96	3,866.81	287.68	336.59	217.10	119.49	2.817	
9,500.00	5,530.00	9,529.60	5,594.00	62.37	61.98	100.96	3,966.81	287.67	336.59	214.33	122.26	2.753	
9,600.00	5,530.00	9,629.60	5,594.00	63.78	63.39	100.96	4,066.81	287.67	336.59	211.55	125.04	2.692	
9,700.00	5,530.00	9,729.60	5,594.00	65.20	64.80	100.96	4,166.81	287.67	336.59	208.77	127.82	2.633	
9,800.00	5,530.00	9,829.60	5,594.00	66.62	66.22	100.96	4,266.81	287.67	336.60	205.99	130.61	2.577	
9,900.00	5,530.00	9,929.60	5,594.00	68.04	67.64	100.96	4,366.81	287.66	336.60	203.19	133.40	2.523	
10,000.00	5,530.00	10,029.60	5,594.00	69.46	69.06	100.96	4,466.81	287.66	336.60	200.40	136.20	2.471	
10,100.00	5,530.00	10,129.60	5,594.00	70.89	70.48	100.96	4,566.81	287.66	336.60	197.60	139.00	2.422	
10,200.00	5,530.00	10,229.60	5,594.00	72.32	71.90	100.96	4,666.81	287.65	336.60	194.80	141.81	2.374	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Sec 25-T10N-R58W - Razor #25N-2408 - HZ - APD		Offset Site Error:		0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:		0.00 usft		
Reference		Offset		Semi Major Axis		Distance							Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
10,300.00	5,530.00	10,329.60	5,594.00	73.74	73.33	100.96	4,766.81	287.65	336.60	191.99	144.61	2.328					
10,400.00	5,530.00	10,429.60	5,594.00	75.18	74.75	100.96	4,866.81	287.65	336.61	189.18	147.43	2.283					
10,500.00	5,530.00	10,529.60	5,594.00	76.61	76.18	100.96	4,966.81	287.65	336.61	186.37	150.24	2.240					
10,600.00	5,530.00	10,629.60	5,594.00	78.04	77.61	100.96	5,066.81	287.64	336.61	183.55	153.06	2.199					
10,700.00	5,530.00	10,729.60	5,594.00	79.48	79.05	100.96	5,166.81	287.64	336.61	180.73	155.88	2.159					
10,800.00	5,530.00	10,829.60	5,594.00	80.91	80.48	100.96	5,266.81	287.64	336.61	177.91	158.70	2.121					
10,900.00	5,530.00	10,929.60	5,594.00	82.35	81.92	100.96	5,366.81	287.63	336.61	175.09	161.53	2.084					
11,000.00	5,530.00	11,029.60	5,594.00	83.79	83.35	100.96	5,466.81	287.63	336.62	172.26	164.36	2.048					
11,100.00	5,530.00	11,129.60	5,594.00	85.23	84.79	100.96	5,566.81	287.63	336.62	169.43	167.19	2.013					
11,200.00	5,530.00	11,229.60	5,594.00	86.67	86.23	100.96	5,666.81	287.63	336.62	166.60	170.02	1.980					
11,300.00	5,530.00	11,329.60	5,594.00	88.11	87.67	100.96	5,766.81	287.62	336.62	163.76	172.86	1.947					
11,400.00	5,530.00	11,429.60	5,594.00	89.56	89.11	100.96	5,866.81	287.62	336.62	160.93	175.69	1.916					
11,500.00	5,530.00	11,529.60	5,594.00	91.00	90.55	100.96	5,966.81	287.62	336.62	158.09	178.53	1.886					
11,600.00	5,530.00	11,629.60	5,594.00	92.45	91.99	100.96	6,066.81	287.62	336.62	155.25	181.37	1.856					
11,700.00	5,530.00	11,729.60	5,594.00	93.89	93.44	100.96	6,166.81	287.61	336.63	152.41	184.21	1.827					
11,800.00	5,530.00	11,829.60	5,594.00	95.34	94.88	100.96	6,266.81	287.61	336.63	149.57	187.06	1.800					
11,900.00	5,530.00	11,929.60	5,594.00	96.78	96.33	100.96	6,366.81	287.61	336.63	146.73	189.90	1.773					
12,000.00	5,530.00	12,029.60	5,594.00	98.23	97.77	100.96	6,466.81	287.60	336.63	143.88	192.75	1.746					
12,100.00	5,530.00	12,129.60	5,594.00	99.68	99.22	100.96	6,566.81	287.60	336.63	141.03	195.60	1.721					
12,200.00	5,530.00	12,229.60	5,594.00	101.13	100.67	100.96	6,666.81	287.60	336.63	138.18	198.45	1.696					
12,300.00	5,530.00	12,329.60	5,594.00	102.58	102.11	100.96	6,766.81	287.60	336.64	135.34	201.30	1.672					
12,400.00	5,530.00	12,429.60	5,594.00	104.03	103.56	100.96	6,866.81	287.59	336.64	132.48	204.15	1.649					
12,500.00	5,530.00	12,529.60	5,594.00	105.48	105.01	100.96	6,966.81	287.59	336.64	129.63	207.01	1.626					
12,600.00	5,530.00	12,629.60	5,594.00	106.93	106.46	100.96	7,066.81	287.59	336.64	126.78	209.86	1.604					
12,700.00	5,530.00	12,729.60	5,594.00	108.39	107.91	100.96	7,166.81	287.58	336.64	123.92	212.72	1.583					
12,800.00	5,530.00	12,829.60	5,594.00	109.84	109.36	100.96	7,266.81	287.58	336.64	121.07	215.57	1.562					
12,900.00	5,530.00	12,929.60	5,594.00	111.29	110.82	100.96	7,366.81	287.58	336.64	118.21	218.43	1.541					
13,000.00	5,530.00	13,029.60	5,594.00	112.75	112.27	100.96	7,466.81	287.58	336.65	115.36	221.29	1.521					
13,100.00	5,530.00	13,129.60	5,594.00	114.20	113.72	100.96	7,566.81	287.57	336.65	112.50	224.15	1.502					
13,200.00	5,530.00	13,229.60	5,594.00	115.65	115.17	100.96	7,666.81	287.57	336.65	109.64	227.01	1.483 Level 3					
13,300.00	5,530.00	13,329.60	5,594.00	117.11	116.63	100.96	7,766.81	287.57	336.65	106.78	229.87	1.465 Level 3					
13,400.00	5,530.00	13,429.60	5,594.00	118.57	118.08	100.96	7,866.81	287.56	336.65	103.92	232.74	1.447 Level 3					
13,500.00	5,530.00	13,529.60	5,594.00	120.02	119.54	100.96	7,966.81	287.56	336.65	101.05	235.60	1.429 Level 3					
13,600.00	5,530.00	13,629.60	5,594.00	121.48	120.99	100.96	8,066.81	287.56	336.66	98.19	238.46	1.412 Level 3					
13,700.00	5,530.00	13,729.60	5,594.00	122.93	122.45	100.96	8,166.81	287.56	336.66	95.33	241.33	1.395 Level 3					
13,800.00	5,530.00	13,829.60	5,594.00	124.39	123.90	100.96	8,266.81	287.55	336.66	92.46	244.19	1.379 Level 3					
13,900.00	5,530.00	13,929.60	5,594.00	125.85	125.36	100.96	8,366.81	287.55	336.66	89.60	247.06	1.363 Level 3					
14,000.00	5,530.00	14,029.60	5,594.00	127.31	126.82	100.96	8,466.81	287.55	336.66	86.73	249.93	1.347 Level 3					
14,100.00	5,530.00	14,129.60	5,594.00	128.76	128.27	100.96	8,566.81	287.55	336.66	83.87	252.79	1.332 Level 3					
14,200.00	5,530.00	14,229.60	5,594.00	130.22	129.73	100.96	8,666.81	287.54	336.66	81.00	255.66	1.317 Level 3					
14,300.00	5,530.00	14,329.60	5,594.00	131.68	131.19	100.96	8,766.81	287.54	336.67	78.13	258.53	1.302 Level 3					
14,400.00	5,530.00	14,429.60	5,594.00	133.14	132.65	100.96	8,866.81	287.54	336.67	75.27	261.40	1.288 Level 3					
14,500.00	5,530.00	14,529.60	5,594.00	134.60	134.10	100.96	8,966.81	287.53	336.67	72.40	264.27	1.274 Level 3					
14,600.00	5,530.00	14,629.60	5,594.00	136.06	135.56	100.96	9,066.81	287.53	336.67	69.53	267.14	1.260 Level 3					
14,700.00	5,530.00	14,729.60	5,594.00	137.52	137.02	100.96	9,166.81	287.53	336.67	66.66	270.01	1.247 Level 2					
14,800.00	5,530.00	14,829.60	5,594.00	138.98	138.48	100.96	9,266.81	287.53	336.67	63.79	272.88	1.234 Level 2					
14,900.00	5,530.00	14,929.60	5,594.00	140.44	139.94	100.96	9,366.81	287.52	336.68	60.92	275.76	1.221 Level 2					
15,000.00	5,530.00	15,029.60	5,594.00	141.90	141.40	100.96	9,466.81	287.52	336.68	58.05	278.63	1.208 Level 2					
15,100.00	5,530.00	15,129.60	5,594.00	143.36	142.86	100.96	9,566.81	287.52	336.68	55.18	281.50	1.196 Level 2					
15,200.00	5,530.00	15,229.60	5,594.00	144.82	144.32	100.96	9,666.81	287.51	336.68	52.30	284.38	1.184 Level 2					
15,300.00	5,530.00	15,329.60	5,594.00	146.28	145.78	100.96	9,766.81	287.51	336.68	49.43	287.25	1.172 Level 2					
15,400.00	5,530.00	15,429.60	5,594.00	147.74	147.24	100.96	9,866.81	287.51	336.68	46.56	290.12	1.160 Level 2					

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design Sec 25-T10N-R58W - Razor #25N-2408 - HZ - APD												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
15,500.00	5,530.00	15,529.60	5,594.00	149.20	148.70	100.96	9,966.81	287.51	336.68	43.68	293.00	1.149	Level 2
15,600.00	5,530.00	15,629.60	5,594.00	150.67	150.16	100.96	10,066.81	287.50	336.69	40.81	295.87	1.138	Level 2
15,691.20	5,530.00	15,720.80	5,594.00	152.00	151.49	100.96	10,158.02	287.50	336.69	38.19	298.50	1.128	Level 2, SF



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-130.52	-50.60	-59.22	77.89					
100.00	100.00	100.00	100.00	0.13	0.13	-130.52	-50.60	-59.22	77.89	77.63	0.27	292.444		
200.00	200.00	200.00	200.00	0.47	0.47	-130.52	-50.60	-59.22	77.89	76.95	0.94	82.807		
300.00	300.00	300.00	300.00	0.81	0.81	-130.52	-50.60	-59.22	77.89	76.28	1.61	48.232 CC		
400.00	399.98	397.67	397.66	1.11	1.12	39.88	-50.89	-60.86	78.02	75.79	2.22	35.068 ES		
500.00	499.84	495.13	494.98	1.41	1.43	44.02	-51.76	-65.76	78.68	75.87	2.82	27.944		
600.00	599.59	592.22	591.71	1.72	1.76	49.76	-53.19	-73.88	81.81	78.37	3.44	23.778		
700.00	699.35	688.81	687.61	2.04	2.09	55.52	-55.18	-85.16	89.02	84.93	4.09	21.751		
800.00	799.11	784.67	782.37	2.37	2.45	60.63	-57.70	-99.50	100.34	95.58	4.76	21.081		
900.00	898.86	880.81	876.88	2.72	2.83	64.82	-60.76	-116.84	115.45	110.01	5.44	21.222		
1,000.00	998.62	979.21	973.47	3.06	3.24	68.12	-64.02	-135.33	131.82	125.70	6.11	21.565		
1,100.00	1,098.38	1,077.62	1,070.06	3.41	3.65	70.68	-67.28	-153.82	148.52	141.73	6.79	21.876		
1,200.00	1,198.13	1,176.02	1,166.65	3.76	4.07	72.73	-70.54	-172.31	165.45	157.98	7.47	22.144		
1,300.00	1,297.89	1,274.42	1,263.25	4.12	4.49	74.40	-73.80	-190.80	182.55	174.39	8.16	22.373		
1,400.00	1,397.65	1,372.82	1,359.84	4.47	4.91	75.78	-77.06	-209.29	199.78	190.93	8.85	22.571		
1,500.00	1,497.40	1,471.22	1,456.43	4.82	5.34	76.94	-80.33	-227.78	217.10	207.56	9.55	22.742		
1,600.00	1,597.16	1,569.62	1,553.02	5.18	5.76	77.93	-83.59	-246.27	234.50	224.25	10.24	22.892		
1,700.00	1,696.91	1,668.02	1,649.62	5.53	6.19	78.78	-86.85	-264.76	251.95	241.01	10.94	23.021		
1,800.00	1,796.67	1,766.42	1,746.21	5.89	6.62	79.52	-90.11	-283.26	269.45	257.80	11.65	23.136		
1,900.00	1,896.43	1,864.82	1,842.80	6.24	7.05	80.17	-93.37	-301.75	286.99	274.64	12.35	23.238		
2,000.00	1,996.18	1,963.22	1,939.40	6.60	7.48	80.75	-96.63	-320.24	304.56	291.50	13.06	23.328		
2,100.00	2,095.94	2,061.62	2,035.99	6.96	7.91	81.26	-99.89	-338.73	322.16	308.40	13.76	23.409		
2,200.00	2,195.70	2,160.02	2,132.58	7.31	8.35	81.72	-103.15	-357.22	339.78	325.31	14.47	23.482		
2,300.00	2,295.45	2,258.42	2,229.17	7.67	8.78	82.14	-106.41	-375.71	357.42	342.24	15.18	23.549		
2,400.00	2,395.21	2,356.82	2,325.77	8.03	9.21	82.51	-109.67	-394.20	375.07	359.19	15.89	23.609		
2,500.00	2,494.97	2,455.22	2,422.36	8.38	9.64	82.86	-112.93	-412.69	392.74	376.15	16.60	23.663		
2,600.00	2,594.72	2,553.62	2,518.95	8.74	10.08	83.17	-116.19	-431.18	410.43	393.12	17.31	23.713		
2,700.00	2,694.48	2,652.02	2,615.54	9.10	10.51	83.46	-119.45	-449.67	428.12	410.10	18.02	23.759		
2,800.00	2,794.23	2,750.43	2,712.14	9.45	10.94	83.72	-122.71	-468.16	445.82	427.09	18.73	23.802		
2,900.00	2,893.99	2,848.83	2,808.73	9.81	11.38	83.96	-125.97	-486.65	463.53	444.09	19.44	23.841		
3,000.00	2,993.75	2,947.23	2,905.32	10.17	11.81	84.19	-129.23	-505.14	481.25	461.10	20.16	23.877		
3,100.00	3,093.50	3,045.63	3,001.91	10.53	12.25	84.40	-132.49	-523.63	498.98	478.11	20.87	23.910		
3,200.00	3,193.26	3,144.03	3,098.51	10.88	12.68	84.60	-135.75	-542.12	516.71	495.13	21.58	23.942		
3,300.00	3,293.02	3,242.43	3,195.10	11.24	13.11	84.78	-139.01	-560.61	534.45	512.15	22.30	23.971		
3,400.00	3,392.77	3,340.83	3,291.69	11.60	13.55	84.95	-142.27	-579.10	552.19	529.18	23.01	23.998		
3,500.00	3,492.53	3,439.23	3,388.29	11.96	13.98	85.11	-145.53	-597.59	569.94	546.21	23.72	24.024		
3,600.00	3,592.39	3,537.61	3,484.86	12.26	14.42	85.45	-148.79	-616.08	587.83	563.44	24.39	24.104		
3,700.00	3,692.37	3,635.87	3,581.32	12.55	14.85	-83.53	-152.05	-634.54	606.00	580.98	25.02	24.218		
3,800.00	3,792.37	3,734.04	3,677.68	12.83	15.28	-84.03	-155.30	-652.99	624.35	598.71	25.64	24.349		
3,900.00	3,892.37	3,832.20	3,774.03	13.08	15.72	-84.50	-158.55	-671.44	642.74	616.52	26.22	24.509		
4,000.00	3,992.37	3,930.36	3,870.39	13.34	16.15	-84.94	-161.80	-689.88	661.17	634.36	26.81	24.660		
4,100.00	4,092.37	4,028.52	3,966.75	13.60	16.58	-85.36	-165.06	-708.33	679.64	652.23	27.40	24.802		
4,200.00	4,192.37	4,126.69	4,063.11	13.86	17.02	-85.75	-168.31	-726.77	698.13	670.14	28.00	24.936		
4,300.00	4,292.37	4,224.85	4,159.47	14.12	17.45	-86.13	-171.56	-745.22	716.66	688.07	28.60	25.062		
4,400.00	4,392.37	4,323.01	4,255.83	14.39	17.89	-86.48	-174.81	-763.67	735.22	706.02	29.20	25.182		
4,500.00	4,492.37	4,421.17	4,352.19	14.66	18.32	-86.82	-178.07	-782.11	753.80	724.00	29.80	25.294		
4,600.00	4,592.37	4,519.34	4,448.55	14.93	18.75	-87.14	-181.32	-800.56	772.41	742.00	30.41	25.401		
4,700.00	4,692.37	4,623.96	4,551.27	15.21	19.20	-87.47	-184.77	-820.12	790.97	759.94	31.03	25.491		
4,800.00	4,792.37	4,759.68	4,685.25	15.49	19.64	-87.81	-188.52	-841.40	806.54	774.86	31.68	25.461		
4,900.00	4,892.37	4,897.19	4,821.87	15.77	20.00	-88.03	-191.20	-856.57	817.50	785.20	32.30	25.310		
5,000.00	4,992.37	5,035.87	4,960.25	16.05	20.33	-88.16	-192.74	-865.31	823.77	790.84	32.93	25.017		
5,100.00	5,092.01	5,167.66	5,092.01	16.32	20.63	-88.67	-193.13	-867.55	825.18	791.65	33.53	24.607		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,182.12	5,171.72	5,247.37	5,171.72	16.52	20.83	-90.00	-193.13	-867.55	824.95	791.05	33.90	24.332		
5,200.00	5,188.61	5,264.25	5,188.61	16.57	20.87	-90.38	-193.13	-867.55	824.97	791.00	33.98	24.280		
5,300.00	5,278.61	5,361.87	5,285.79	16.79	21.11	-92.72	-185.53	-867.55	826.03	791.67	34.35	24.045		
5,400.00	5,358.71	5,467.41	5,387.27	17.01	21.35	-95.06	-157.19	-867.55	828.65	793.94	34.70	23.877		
5,500.00	5,425.97	5,582.56	5,488.97	17.24	21.58	-97.34	-103.70	-867.54	832.57	797.51	35.05	23.751		
5,600.00	5,477.90	5,708.93	5,584.07	17.52	21.78	-99.44	-20.95	-867.54	837.22	801.78	35.44	23.622		
5,700.00	5,512.61	5,847.28	5,662.04	17.86	21.93	-101.23	92.85	-867.54	841.74	805.79	35.95	23.415		
5,800.00	5,528.82	5,996.42	5,709.45	18.27	22.08	-102.47	233.72	-867.53	845.11	808.44	36.67	23.049		
5,900.00	5,530.00	6,130.06	5,718.00	18.76	22.29	-102.84	366.84	-867.52	846.06	808.43	37.63	22.483		
6,000.00	5,530.00	6,230.06	5,718.00	19.35	22.55	-102.84	466.84	-867.52	846.05	807.34	38.71	21.854		
6,100.00	5,530.00	6,330.06	5,718.00	20.03	22.94	-102.84	566.84	-867.52	846.04	806.07	39.98	21.164		
6,200.00	5,530.00	6,430.06	5,718.00	20.79	23.46	-102.84	666.84	-867.51	846.03	804.63	41.40	20.436		
6,300.00	5,530.00	6,530.06	5,718.00	21.63	24.10	-102.84	766.84	-867.51	846.03	803.06	42.97	19.689		
6,400.00	5,530.00	6,630.06	5,718.00	22.53	24.84	-102.84	866.84	-867.50	846.02	801.35	44.67	18.939		
6,500.00	5,530.00	6,730.06	5,718.00	23.49	25.67	-102.84	966.84	-867.50	846.01	799.52	46.49	18.198		
6,600.00	5,530.00	6,830.06	5,718.00	24.50	26.56	-102.84	1,066.84	-867.50	846.00	797.59	48.41	17.476		
6,700.00	5,530.00	6,930.06	5,718.00	25.55	27.51	-102.84	1,166.84	-867.49	845.99	795.57	50.42	16.779		
6,800.00	5,530.00	7,030.06	5,718.00	26.65	28.51	-102.84	1,266.84	-867.49	845.98	793.47	52.51	16.110		
6,900.00	5,530.00	7,130.06	5,718.00	27.77	29.55	-102.84	1,366.84	-867.48	845.98	791.30	54.68	15.472		
7,000.00	5,530.00	7,230.06	5,718.00	28.93	30.63	-102.84	1,466.84	-867.48	845.97	789.06	56.91	14.866		
7,100.00	5,530.00	7,330.06	5,718.00	30.12	31.74	-102.84	1,566.84	-867.47	845.96	786.77	59.19	14.292		
7,200.00	5,530.00	7,430.06	5,718.00	31.33	32.88	-102.84	1,666.84	-867.47	845.95	784.42	61.53	13.749		
7,300.00	5,530.00	7,530.06	5,718.00	32.57	34.05	-102.84	1,766.84	-867.47	845.94	782.04	63.91	13.237		
7,400.00	5,530.00	7,630.06	5,718.00	33.82	35.24	-102.84	1,866.84	-867.46	845.93	779.61	66.33	12.754		
7,500.00	5,530.00	7,730.06	5,718.00	35.09	36.45	-102.84	1,966.84	-867.46	845.93	777.14	68.78	12.299		
7,600.00	5,530.00	7,830.06	5,718.00	36.37	37.68	-102.84	2,066.84	-867.45	845.92	774.65	71.27	11.870		
7,700.00	5,530.00	7,930.06	5,718.00	37.67	38.93	-102.84	2,166.84	-867.45	845.91	772.13	73.78	11.465		
7,800.00	5,530.00	8,030.06	5,718.00	38.98	40.19	-102.84	2,266.84	-867.45	845.90	769.58	76.32	11.083		
7,900.00	5,530.00	8,130.06	5,718.00	40.30	41.46	-102.84	2,366.84	-867.44	845.89	767.00	78.89	10.723		
8,000.00	5,530.00	8,230.06	5,718.00	41.63	42.75	-102.84	2,466.84	-867.44	845.88	764.41	81.47	10.382		
8,100.00	5,530.00	8,330.06	5,718.00	42.97	44.05	-102.84	2,566.84	-867.43	845.88	761.80	84.08	10.060		
8,200.00	5,530.00	8,430.06	5,718.00	44.32	45.36	-102.84	2,666.84	-867.43	845.87	759.16	86.70	9.756		
8,300.00	5,530.00	8,530.06	5,718.00	45.68	46.68	-102.84	2,766.84	-867.42	845.86	756.52	89.34	9.468		
8,400.00	5,530.00	8,630.06	5,718.00	47.04	48.01	-102.84	2,866.84	-867.42	845.85	753.86	91.99	9.195		
8,500.00	5,530.00	8,730.06	5,718.00	48.41	49.35	-102.84	2,966.84	-867.42	845.84	751.18	94.66	8.936		
8,600.00	5,530.00	8,830.06	5,718.00	49.79	50.69	-102.84	3,066.84	-867.41	845.83	748.49	97.34	8.690		
8,700.00	5,530.00	8,930.06	5,718.00	51.17	52.04	-102.84	3,166.84	-867.41	845.83	745.80	100.03	8.456		
8,800.00	5,530.00	9,030.06	5,718.00	52.56	53.40	-102.84	3,266.84	-867.40	845.82	743.09	102.73	8.233		
8,900.00	5,530.00	9,130.06	5,718.00	53.95	54.76	-102.84	3,366.84	-867.40	845.81	740.37	105.44	8.022		
9,000.00	5,530.00	9,230.06	5,718.00	55.34	56.13	-102.84	3,466.84	-867.39	845.80	737.64	108.16	7.820		
9,100.00	5,530.00	9,330.06	5,718.00	56.74	57.51	-102.84	3,566.84	-867.39	845.79	734.91	110.88	7.628		
9,200.00	5,530.00	9,430.06	5,718.00	58.14	58.89	-102.84	3,666.84	-867.39	845.78	732.16	113.62	7.444		
9,300.00	5,530.00	9,530.06	5,718.00	59.55	60.27	-102.84	3,766.84	-867.38	845.77	729.41	116.36	7.269		
9,400.00	5,530.00	9,630.06	5,718.00	60.96	61.66	-102.84	3,866.84	-867.38	845.77	726.66	119.11	7.101		
9,500.00	5,530.00	9,730.06	5,718.00	62.37	63.05	-102.84	3,966.84	-867.37	845.76	723.89	121.86	6.940		
9,600.00	5,530.00	9,830.06	5,718.00	63.78	64.44	-102.84	4,066.84	-867.37	845.75	721.13	124.62	6.786		
9,700.00	5,530.00	9,930.06	5,718.00	65.20	65.84	-102.84	4,166.84	-867.37	845.74	718.35	127.39	6.639		
9,800.00	5,530.00	10,030.06	5,718.00	66.62	67.24	-102.84	4,266.84	-867.36	845.73	715.57	130.16	6.498		
9,900.00	5,530.00	10,130.06	5,718.00	68.04	68.64	-102.84	4,366.84	-867.36	845.72	712.79	132.93	6.362		
10,000.00	5,530.00	10,230.06	5,718.00	69.46	70.05	-102.84	4,466.84	-867.35	845.72	710.00	135.71	6.232		
10,100.00	5,530.00	10,330.06	5,718.00	70.89	71.46	-102.84	4,566.84	-867.35	845.71	707.21	138.50	6.106		
10,200.00	5,530.00	10,430.06	5,718.00	72.32	72.87	-102.84	4,666.84	-867.34	845.70	704.41	141.29	5.986		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,300.00	5,530.00	10,530.06	5,718.00	73.74	74.28	-102.84	4,766.84	-867.34	845.69	701.61	144.08	5.870		
10,400.00	5,530.00	10,630.06	5,718.00	75.18	75.70	-102.85	4,866.84	-867.34	845.68	698.81	146.87	5.758		
10,500.00	5,530.00	10,730.06	5,718.00	76.61	77.12	-102.85	4,966.84	-867.33	845.67	696.01	149.67	5.650		
10,600.00	5,530.00	10,830.06	5,718.00	78.04	78.54	-102.85	5,066.84	-867.33	845.67	693.20	152.47	5.546		
10,700.00	5,530.00	10,930.06	5,718.00	79.48	79.96	-102.85	5,166.84	-867.32	845.66	690.38	155.27	5.446		
10,800.00	5,530.00	11,030.06	5,718.00	80.91	81.38	-102.85	5,266.84	-867.32	845.65	687.57	158.08	5.349		
10,900.00	5,530.00	11,130.06	5,718.00	82.35	82.81	-102.85	5,366.84	-867.31	845.64	684.75	160.89	5.256		
11,000.00	5,530.00	11,230.06	5,718.00	83.79	84.24	-102.85	5,466.84	-867.31	845.63	681.93	163.70	5.166		
11,100.00	5,530.00	11,330.06	5,718.00	85.23	85.66	-102.85	5,566.84	-867.31	845.62	679.11	166.52	5.078		
11,200.00	5,530.00	11,430.06	5,718.00	86.67	87.09	-102.85	5,666.84	-867.30	845.62	676.28	169.33	4.994		
11,300.00	5,530.00	11,530.06	5,718.00	88.11	88.53	-102.85	5,766.84	-867.30	845.61	673.46	172.15	4.912		
11,400.00	5,530.00	11,630.06	5,718.00	89.56	89.96	-102.85	5,866.84	-867.29	845.60	670.63	174.97	4.833		
11,500.00	5,530.00	11,730.06	5,718.00	91.00	91.39	-102.85	5,966.84	-867.29	845.59	667.80	177.80	4.756		
11,600.00	5,530.00	11,830.06	5,718.00	92.45	92.83	-102.85	6,066.84	-867.29	845.58	664.96	180.62	4.682		
11,700.00	5,530.00	11,930.06	5,718.00	93.89	94.26	-102.85	6,166.84	-867.28	845.57	662.13	183.45	4.609		
11,800.00	5,530.00	12,030.06	5,718.00	95.34	95.70	-102.85	6,266.84	-867.28	845.57	659.29	186.27	4.539		
11,900.00	5,530.00	12,130.06	5,718.00	96.78	97.14	-102.85	6,366.84	-867.27	845.56	656.45	189.10	4.471		
12,000.00	5,530.00	12,230.06	5,718.00	98.23	98.58	-102.85	6,466.84	-867.27	845.55	653.61	191.93	4.405		
12,100.00	5,530.00	12,330.06	5,718.00	99.68	100.02	-102.85	6,566.84	-867.26	845.54	650.77	194.77	4.341		
12,200.00	5,530.00	12,430.06	5,718.00	101.13	101.46	-102.85	6,666.84	-867.26	845.53	647.93	197.60	4.279		
12,300.00	5,530.00	12,530.06	5,718.00	102.58	102.90	-102.85	6,766.84	-867.26	845.52	645.09	200.44	4.218		
12,400.00	5,530.00	12,630.06	5,718.00	104.03	104.34	-102.85	6,866.84	-867.25	845.52	642.24	203.27	4.160		
12,500.00	5,530.00	12,730.06	5,718.00	105.48	105.79	-102.85	6,966.84	-867.25	845.51	639.40	206.11	4.102		
12,600.00	5,530.00	12,830.06	5,718.00	106.93	107.23	-102.85	7,066.84	-867.24	845.50	636.55	208.95	4.046		
12,700.00	5,530.00	12,930.06	5,718.00	108.39	108.68	-102.85	7,166.84	-867.24	845.49	633.70	211.79	3.992		
12,800.00	5,530.00	13,030.06	5,718.00	109.84	110.12	-102.85	7,266.84	-867.24	845.48	630.85	214.63	3.939		
12,900.00	5,530.00	13,130.06	5,718.00	111.29	111.57	-102.85	7,366.84	-867.23	845.47	628.00	217.47	3.888		
13,000.00	5,530.00	13,230.06	5,718.00	112.75	113.01	-102.85	7,466.84	-867.23	845.47	625.15	220.32	3.838		
13,100.00	5,530.00	13,330.06	5,718.00	114.20	114.46	-102.85	7,566.84	-867.22	845.46	622.30	223.16	3.789		
13,200.00	5,530.00	13,430.06	5,718.00	115.65	115.91	-102.85	7,666.84	-867.22	845.45	619.44	226.01	3.741		
13,300.00	5,530.00	13,530.06	5,718.00	117.11	117.36	-102.85	7,766.84	-867.21	845.44	616.59	228.85	3.694		
13,400.00	5,530.00	13,630.06	5,718.00	118.57	118.81	-102.85	7,866.84	-867.21	845.43	613.73	231.70	3.649		
13,500.00	5,530.00	13,730.06	5,718.00	120.02	120.26	-102.85	7,966.84	-867.21	845.42	610.88	234.55	3.605		
13,600.00	5,530.00	13,830.06	5,718.00	121.48	121.71	-102.85	8,066.84	-867.20	845.42	608.02	237.39	3.561		
13,700.00	5,530.00	13,930.06	5,718.00	122.93	123.16	-102.85	8,166.84	-867.20	845.41	605.16	240.24	3.519		
13,800.00	5,530.00	14,030.06	5,718.00	124.39	124.61	-102.85	8,266.84	-867.19	845.40	602.30	243.09	3.478		
13,900.00	5,530.00	14,130.06	5,718.00	125.85	126.06	-102.85	8,366.84	-867.19	845.39	599.45	245.94	3.437		
14,000.00	5,530.00	14,230.06	5,718.00	127.31	127.52	-102.85	8,466.84	-867.18	845.38	596.59	248.80	3.398		
14,100.00	5,530.00	14,330.06	5,718.00	128.76	128.97	-102.85	8,566.84	-867.18	845.37	593.73	251.65	3.359		
14,200.00	5,530.00	14,430.06	5,718.00	130.22	130.42	-102.85	8,666.84	-867.18	845.36	590.86	254.50	3.322		
14,300.00	5,530.00	14,530.06	5,718.00	131.68	131.88	-102.85	8,766.84	-867.17	845.36	588.00	257.35	3.285		
14,400.00	5,530.00	14,630.06	5,718.00	133.14	133.33	-102.85	8,866.84	-867.17	845.35	585.14	260.21	3.249		
14,500.00	5,530.00	14,730.06	5,718.00	134.60	134.78	-102.85	8,966.84	-867.16	845.34	582.28	263.06	3.213		
14,600.00	5,530.00	14,830.06	5,718.00	136.06	136.24	-102.85	9,066.84	-867.16	845.33	579.41	265.92	3.179		
14,700.00	5,530.00	14,930.06	5,718.00	137.52	137.69	-102.85	9,166.84	-867.16	845.32	576.55	268.77	3.145		
14,800.00	5,530.00	15,030.06	5,718.00	138.98	139.15	-102.85	9,266.84	-867.15	845.31	573.68	271.63	3.112		
14,900.00	5,530.00	15,130.06	5,718.00	140.44	140.60	-102.85	9,366.84	-867.15	845.31	570.82	274.49	3.080		
15,000.00	5,530.00	15,230.06	5,718.00	141.90	142.06	-102.85	9,466.84	-867.14	845.30	567.95	277.34	3.048		
15,100.00	5,530.00	15,330.06	5,718.00	143.36	143.52	-102.85	9,566.84	-867.14	845.29	565.09	280.20	3.017		
15,200.00	5,530.00	15,430.06	5,718.00	144.82	144.97	-102.85	9,666.84	-867.13	845.28	562.22	283.06	2.986		
15,300.00	5,530.00	15,530.06	5,718.00	146.28	146.43	-102.85	9,766.84	-867.13	845.27	559.35	285.92	2.956		
15,400.00	5,530.00	15,630.06	5,718.00	147.74	147.89	-102.85	9,866.84	-867.13	845.26	556.49	288.78	2.927		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



WOG
Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	Hz	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design Sec 25-T10N-R58W - Razor #25N-2437 - Hz - APD												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
15,500.00	5,530.00	15,730.06	5,718.00	149.20	149.35	-102.85	9,966.84	-867.12	845.26	553.62	291.64	2.898	
15,600.00	5,530.00	15,830.06	5,718.00	150.67	150.80	-102.85	10,066.84	-867.12	845.25	550.75	294.50	2.870	
15,665.84	5,530.00	15,895.90	5,718.00	151.63	151.76	-102.85	10,132.68	-867.11	845.24	548.86	296.38	2.852	
15,691.20	5,530.00	15,918.20	5,718.00	152.00	152.09	-102.85	10,154.99	-867.11	845.25	548.18	297.06	2.845 SF	



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-149.99	-50.60	-29.22	58.43					
100.00	100.00	100.00	100.00	0.13	0.13	-149.99	-50.60	-29.22	58.43	58.17	0.27	219.392		
200.00	200.00	200.00	200.00	0.47	0.47	-149.99	-50.60	-29.22	58.43	57.49	0.94	62.122		
300.00	300.00	300.00	300.00	0.81	0.81	-149.99	-50.60	-29.22	58.43	56.82	1.61	36.184		
400.00	399.98	398.43	398.41	1.11	1.12	20.63	-51.18	-30.81	58.12	55.90	2.23	26.107		
500.00	499.84	496.70	496.54	1.41	1.43	25.58	-52.91	-35.57	57.48	54.67	2.82	20.411		
515.06	514.86	511.47	511.28	1.46	1.48	26.60	-53.27	-36.55	57.44	54.53	2.91	19.749	CC, ES	
600.00	599.59	594.67	594.15	1.72	1.75	32.97	-55.78	-43.45	58.86	55.42	3.44	17.133		
700.00	699.35	693.10	691.91	2.04	2.09	40.83	-59.70	-54.23	64.12	60.04	4.09	15.694		
800.00	799.11	792.55	790.62	2.37	2.45	47.55	-63.85	-65.61	70.96	66.22	4.74	14.961		
900.00	898.86	892.00	889.33	2.72	2.82	53.04	-67.99	-77.00	78.61	73.20	5.41	14.529		
1,000.00	998.62	991.45	988.04	3.06	3.19	57.53	-72.14	-88.39	86.84	80.75	6.09	14.269		
1,100.00	1,098.38	1,090.90	1,086.75	3.41	3.56	61.23	-76.28	-99.78	95.51	88.74	6.77	14.111		
1,200.00	1,198.13	1,190.36	1,185.46	3.76	3.94	64.30	-80.43	-111.17	104.51	97.06	7.46	14.016		
1,300.00	1,297.89	1,289.81	1,284.17	4.12	4.32	66.88	-84.57	-122.56	113.77	105.62	8.15	13.959		
1,400.00	1,397.65	1,389.26	1,382.88	4.47	4.69	69.07	-88.72	-133.95	123.21	114.37	8.85	13.928		
1,500.00	1,497.40	1,488.71	1,481.59	4.82	5.07	70.95	-92.86	-145.34	132.81	123.27	9.55	13.912		
1,600.00	1,597.16	1,588.16	1,580.29	5.18	5.45	72.57	-97.01	-156.73	142.54	132.29	10.25	13.908		
1,700.00	1,696.91	1,687.61	1,679.00	5.53	5.83	73.98	-101.16	-168.12	152.36	141.40	10.95	13.911		
1,800.00	1,796.67	1,787.06	1,777.71	5.89	6.21	75.22	-105.30	-179.51	162.26	150.60	11.66	13.918		
1,900.00	1,896.43	1,886.51	1,876.42	6.24	6.59	76.32	-109.45	-190.89	172.23	159.86	12.37	13.928		
2,000.00	1,996.18	1,985.96	1,975.13	6.60	6.98	77.30	-113.59	-202.28	182.25	169.18	13.07	13.941		
2,100.00	2,095.94	2,085.41	2,073.84	6.96	7.36	78.18	-117.74	-213.67	192.32	178.54	13.78	13.954		
2,200.00	2,195.70	2,184.86	2,172.55	7.31	7.74	78.97	-121.88	-225.06	202.43	187.94	14.49	13.968		
2,300.00	2,295.45	2,284.31	2,271.26	7.67	8.12	79.68	-126.03	-236.45	212.58	197.38	15.20	13.983		
2,400.00	2,395.21	2,383.76	2,369.97	8.03	8.50	80.33	-130.17	-247.84	222.76	206.84	15.91	13.997		
2,500.00	2,494.97	2,483.21	2,468.68	8.38	8.89	80.92	-134.32	-259.23	232.96	216.33	16.63	14.012		
2,600.00	2,594.72	2,582.66	2,567.39	8.74	9.27	81.46	-138.46	-270.62	243.18	225.84	17.34	14.026		
2,700.00	2,694.48	2,682.12	2,666.10	9.10	9.65	81.96	-142.61	-282.01	253.43	235.38	18.05	14.039		
2,800.00	2,794.23	2,781.57	2,764.81	9.45	10.03	82.42	-146.75	-293.40	263.69	244.92	18.76	14.053		
2,900.00	2,893.99	2,881.02	2,863.52	9.81	10.42	82.85	-150.90	-304.78	273.97	254.49	19.48	14.066		
3,000.00	2,993.75	2,980.47	2,962.23	10.17	10.80	83.24	-155.04	-316.17	284.26	264.07	20.19	14.078		
3,100.00	3,093.50	3,079.92	3,060.94	10.53	11.18	83.61	-159.19	-327.56	294.56	273.66	20.90	14.090		
3,200.00	3,193.26	3,179.37	3,159.65	10.88	11.57	83.95	-163.33	-338.95	304.88	283.26	21.62	14.102		
3,300.00	3,293.02	3,278.82	3,258.35	11.24	11.95	84.27	-167.48	-350.34	315.20	292.87	22.33	14.113		
3,400.00	3,392.77	3,378.27	3,357.06	11.60	12.33	84.57	-171.62	-361.73	325.53	302.49	23.05	14.124		
3,500.00	3,492.53	3,477.72	3,455.77	11.96	12.72	84.85	-175.77	-373.12	335.88	312.11	23.76	14.135		
3,600.00	3,592.39	3,577.16	3,554.47	12.26	13.10	85.04	-179.91	-384.51	346.38	321.96	24.42	14.185		
3,700.00	3,692.37	3,676.51	3,653.08	12.55	13.48	-84.33	-184.06	-395.88	357.19	332.15	25.05	14.261		
3,800.00	3,792.37	3,775.76	3,751.59	12.83	13.86	-85.15	-188.19	-407.25	368.23	342.57	25.66	14.349		
3,900.00	3,892.37	3,875.02	3,850.11	13.08	14.25	-85.92	-192.33	-418.62	379.34	353.09	26.24	14.454		
4,000.00	3,992.37	3,974.27	3,948.62	13.34	14.63	-86.65	-196.47	-429.98	390.51	363.68	26.83	14.556		
4,100.00	4,092.37	4,073.53	4,047.14	13.60	15.01	-87.34	-200.60	-441.35	401.74	374.32	27.42	14.653		
4,200.00	4,192.37	4,172.78	4,145.65	13.86	15.40	-87.99	-204.74	-452.72	413.03	385.02	28.01	14.746		
4,300.00	4,292.37	4,272.03	4,244.17	14.12	15.78	-88.61	-208.88	-464.08	424.36	395.76	28.61	14.835		
4,400.00	4,392.37	4,371.29	4,342.68	14.39	16.16	-89.19	-213.02	-475.45	435.74	406.54	29.21	14.920		
4,500.00	4,492.37	4,470.54	4,441.20	14.66	16.54	-89.75	-217.15	-486.82	447.17	417.36	29.81	15.002		
4,600.00	4,592.37	4,569.80	4,539.71	14.93	16.93	-90.27	-221.29	-498.18	458.63	428.22	30.41	15.080		
4,700.00	4,692.37	4,669.05	4,638.23	15.21	17.31	-90.77	-225.43	-509.55	470.13	439.11	31.02	15.155		
4,800.00	4,792.37	4,774.62	4,743.04	15.49	17.69	-91.27	-229.73	-521.38	481.44	449.81	31.63	15.219		
4,900.00	4,892.37	4,873.33	4,841.28	15.77	18.01	-91.66	-233.29	-531.15	489.74	457.53	32.21	15.203		
5,000.00	4,992.37	5,012.70	4,980.52	16.05	18.30	-91.86	-235.17	-536.31	494.12	461.33	32.79	15.067		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.00	5,092.01	5,124.20	5,092.01	16.32	18.59	-92.63	-235.48	-537.17	495.11	461.76	33.35	14.846		
5,200.00	5,188.61	5,220.80	5,188.61	16.57	18.84	-95.23	-235.48	-537.17	496.92	463.16	33.76	14.718		
5,300.00	5,278.61	5,310.80	5,278.61	16.79	19.08	-98.99	-235.48	-537.17	502.96	468.91	34.06	14.769		
5,400.00	5,358.71	5,414.16	5,381.63	17.01	19.35	-103.92	-229.06	-537.17	515.81	481.60	34.21	15.079		
5,500.00	5,425.97	5,541.71	5,503.92	17.24	19.66	-109.21	-193.96	-537.17	533.20	499.02	34.18	15.601		
5,600.00	5,477.90	5,697.36	5,636.01	17.52	19.95	-114.36	-112.72	-537.17	552.01	518.04	33.97	16.249		
5,700.00	5,512.61	5,888.16	5,756.32	17.86	20.17	-118.63	34.01	-537.17	567.47	533.64	33.83	16.776		
5,800.00	5,528.82	6,108.30	5,819.29	18.27	20.29	-120.51	243.24	-537.18	574.04	539.72	34.32	16.727		
5,900.00	5,530.00	6,231.91	5,821.00	18.76	20.58	-120.47	366.80	-537.18	573.82	538.64	35.18	16.310		
6,000.00	5,530.00	6,331.91	5,821.00	19.35	21.10	-120.47	466.80	-537.18	573.82	537.68	36.14	15.879		
6,100.00	5,530.00	6,431.91	5,821.00	20.03	21.74	-120.47	566.80	-537.18	573.82	536.57	37.25	15.404		
6,200.00	5,530.00	6,531.91	5,821.00	20.79	22.46	-120.47	666.80	-537.18	573.81	535.31	38.51	14.902		
6,300.00	5,530.00	6,631.91	5,821.00	21.63	23.26	-120.47	766.80	-537.18	573.81	533.92	39.89	14.384		
6,400.00	5,530.00	6,731.91	5,821.00	22.53	24.12	-120.47	866.80	-537.19	573.81	532.42	41.39	13.862		
6,500.00	5,530.00	6,831.91	5,821.00	23.49	25.03	-120.47	966.80	-537.19	573.81	530.81	43.00	13.344		
6,600.00	5,530.00	6,931.91	5,821.00	24.50	26.00	-120.47	1,066.80	-537.19	573.80	529.10	44.70	12.836		
6,700.00	5,530.00	7,031.91	5,821.00	25.55	27.01	-120.47	1,166.80	-537.19	573.80	527.32	46.49	12.344		
6,800.00	5,530.00	7,131.91	5,821.00	26.65	28.06	-120.47	1,266.80	-537.19	573.80	525.46	48.34	11.870		
6,900.00	5,530.00	7,231.91	5,821.00	27.77	29.15	-120.47	1,366.80	-537.19	573.80	523.53	50.27	11.415		
7,000.00	5,530.00	7,331.91	5,821.00	28.93	30.26	-120.47	1,466.80	-537.20	573.80	521.55	52.25	10.982		
7,100.00	5,530.00	7,431.91	5,821.00	30.12	31.41	-120.47	1,566.80	-537.20	573.79	519.51	54.28	10.571		
7,200.00	5,530.00	7,531.91	5,821.00	31.33	32.59	-120.47	1,666.80	-537.20	573.79	517.43	56.36	10.181		
7,300.00	5,530.00	7,631.91	5,821.00	32.57	33.78	-120.47	1,766.80	-537.20	573.79	515.31	58.48	9.812		
7,400.00	5,530.00	7,731.91	5,821.00	33.82	35.00	-120.48	1,866.80	-537.20	573.79	513.15	60.64	9.462		
7,500.00	5,530.00	7,831.91	5,821.00	35.09	36.23	-120.48	1,966.80	-537.20	573.78	510.95	62.83	9.132		
7,600.00	5,530.00	7,931.91	5,821.00	36.37	37.49	-120.48	2,066.80	-537.21	573.78	508.73	65.05	8.820		
7,700.00	5,530.00	8,031.91	5,821.00	37.67	38.75	-120.48	2,166.80	-537.21	573.78	506.48	67.30	8.526		
7,800.00	5,530.00	8,131.91	5,821.00	38.98	40.04	-120.48	2,266.80	-537.21	573.78	504.20	69.57	8.247		
7,900.00	5,530.00	8,231.91	5,821.00	40.30	41.33	-120.48	2,366.80	-537.21	573.77	501.90	71.87	7.984		
8,000.00	5,530.00	8,331.91	5,821.00	41.63	42.64	-120.48	2,466.80	-537.21	573.77	499.59	74.18	7.734		
8,100.00	5,530.00	8,431.91	5,821.00	42.97	43.95	-120.48	2,566.80	-537.21	573.77	497.25	76.52	7.499		
8,200.00	5,530.00	8,531.91	5,821.00	44.32	45.28	-120.48	2,666.80	-537.21	573.77	494.90	78.87	7.275		
8,300.00	5,530.00	8,631.91	5,821.00	45.68	46.61	-120.48	2,766.80	-537.22	573.76	492.53	81.23	7.063		
8,400.00	5,530.00	8,731.91	5,821.00	47.04	47.95	-120.48	2,866.80	-537.22	573.76	490.15	83.61	6.862		
8,500.00	5,530.00	8,831.91	5,821.00	48.41	49.30	-120.48	2,966.80	-537.22	573.76	487.76	86.00	6.672		
8,600.00	5,530.00	8,931.91	5,821.00	49.79	50.66	-120.48	3,066.80	-537.22	573.76	485.35	88.40	6.490		
8,700.00	5,530.00	9,031.91	5,821.00	51.17	52.02	-120.48	3,166.80	-537.22	573.75	482.94	90.82	6.318		
8,800.00	5,530.00	9,131.91	5,821.00	52.56	53.39	-120.48	3,266.80	-537.22	573.75	480.51	93.24	6.153		
8,900.00	5,530.00	9,231.91	5,821.00	53.95	54.76	-120.48	3,366.80	-537.23	573.75	478.08	95.67	5.997		
9,000.00	5,530.00	9,331.91	5,821.00	55.34	56.14	-120.48	3,466.80	-537.23	573.75	475.63	98.11	5.848		
9,100.00	5,530.00	9,431.91	5,821.00	56.74	57.52	-120.48	3,566.80	-537.23	573.74	473.18	100.56	5.705		
9,200.00	5,530.00	9,531.91	5,821.00	58.14	58.91	-120.48	3,666.80	-537.23	573.74	470.72	103.02	5.569		
9,300.00	5,530.00	9,631.91	5,821.00	59.55	60.30	-120.48	3,766.80	-537.23	573.74	468.26	105.48	5.439		
9,400.00	5,530.00	9,731.91	5,821.00	60.96	61.70	-120.48	3,866.80	-537.23	573.74	465.78	107.95	5.315		
9,500.00	5,530.00	9,831.91	5,821.00	62.37	63.10	-120.48	3,966.80	-537.24	573.73	463.31	110.43	5.196		
9,600.00	5,530.00	9,931.91	5,821.00	63.78	64.50	-120.48	4,066.80	-537.24	573.73	460.82	112.91	5.081		
9,700.00	5,530.00	10,031.91	5,821.00	65.20	65.90	-120.48	4,166.80	-537.24	573.73	458.34	115.39	4.972		
9,800.00	5,530.00	10,131.91	5,821.00	66.62	67.31	-120.48	4,266.80	-537.24	573.73	455.84	117.89	4.867		
9,900.00	5,530.00	10,231.91	5,821.00	68.04	68.72	-120.48	4,366.80	-537.24	573.73	453.34	120.38	4.766		
10,000.00	5,530.00	10,331.91	5,821.00	69.46	70.13	-120.48	4,466.80	-537.24	573.72	450.84	122.88	4.669		
10,100.00	5,530.00	10,431.91	5,821.00	70.89	71.55	-120.48	4,566.80	-537.24	573.72	448.34	125.38	4.576		
10,200.00	5,530.00	10,531.91	5,821.00	72.32	72.97	-120.48	4,666.80	-537.25	573.72	445.83	127.89	4.486		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,300.00	5,530.00	10,631.91	5,821.00	73.74	74.38	-120.48	4,766.80	-537.25	573.72	443.31	130.40	4.400		
10,400.00	5,530.00	10,731.91	5,821.00	75.18	75.81	-120.48	4,866.80	-537.25	573.71	440.80	132.92	4.316		
10,500.00	5,530.00	10,831.91	5,821.00	76.61	77.23	-120.48	4,966.80	-537.25	573.71	438.28	135.43	4.236		
10,600.00	5,530.00	10,931.91	5,821.00	78.04	78.65	-120.48	5,066.80	-537.25	573.71	435.75	137.95	4.159		
10,700.00	5,530.00	11,031.91	5,821.00	79.48	80.08	-120.48	5,166.80	-537.25	573.71	433.23	140.48	4.084		
10,800.00	5,530.00	11,131.91	5,821.00	80.91	81.51	-120.48	5,266.80	-537.26	573.70	430.70	143.00	4.012		
10,900.00	5,530.00	11,231.91	5,821.00	82.35	82.94	-120.48	5,366.80	-537.26	573.70	428.17	145.53	3.942		
11,000.00	5,530.00	11,331.91	5,821.00	83.79	84.37	-120.48	5,466.80	-537.26	573.70	425.64	148.06	3.875		
11,100.00	5,530.00	11,431.91	5,821.00	85.23	85.80	-120.48	5,566.80	-537.26	573.70	423.10	150.59	3.810		
11,200.00	5,530.00	11,531.91	5,821.00	86.67	87.24	-120.48	5,666.80	-537.26	573.69	420.56	153.13	3.746		
11,300.00	5,530.00	11,631.91	5,821.00	88.11	88.67	-120.48	5,766.80	-537.26	573.69	418.02	155.67	3.685		
11,400.00	5,530.00	11,731.91	5,821.00	89.56	90.11	-120.48	5,866.80	-537.27	573.69	415.48	158.21	3.626		
11,500.00	5,530.00	11,831.91	5,821.00	91.00	91.55	-120.48	5,966.80	-537.27	573.69	412.94	160.75	3.569		
11,600.00	5,530.00	11,931.91	5,821.00	92.45	92.98	-120.48	6,066.80	-537.27	573.68	410.39	163.29	3.513		
11,700.00	5,530.00	12,031.91	5,821.00	93.89	94.42	-120.48	6,166.80	-537.27	573.68	407.85	165.83	3.459		
11,800.00	5,530.00	12,131.91	5,821.00	95.34	95.87	-120.48	6,266.80	-537.27	573.68	405.30	168.38	3.407		
11,900.00	5,530.00	12,231.91	5,821.00	96.78	97.31	-120.48	6,366.80	-537.27	573.68	402.75	170.93	3.356		
12,000.00	5,530.00	12,331.91	5,821.00	98.23	98.75	-120.48	6,466.80	-537.28	573.67	400.20	173.48	3.307		
12,100.00	5,530.00	12,431.91	5,821.00	99.68	100.19	-120.48	6,566.80	-537.28	573.67	397.64	176.03	3.259		
12,200.00	5,530.00	12,531.91	5,821.00	101.13	101.64	-120.48	6,666.80	-537.28	573.67	395.09	178.58	3.212		
12,300.00	5,530.00	12,631.91	5,821.00	102.58	103.08	-120.48	6,766.80	-537.28	573.67	392.53	181.13	3.167		
12,400.00	5,530.00	12,731.91	5,821.00	104.03	104.53	-120.48	6,866.80	-537.28	573.67	389.98	183.69	3.123		
12,500.00	5,530.00	12,831.91	5,821.00	105.48	105.97	-120.48	6,966.80	-537.28	573.66	387.42	186.24	3.080		
12,600.00	5,530.00	12,931.91	5,821.00	106.93	107.42	-120.48	7,066.80	-537.28	573.66	384.86	188.80	3.038		
12,700.00	5,530.00	13,031.91	5,821.00	108.39	108.87	-120.48	7,166.80	-537.29	573.66	382.30	191.36	2.998		
12,800.00	5,530.00	13,131.91	5,821.00	109.84	110.32	-120.48	7,266.80	-537.29	573.66	379.74	193.92	2.958		
12,900.00	5,530.00	13,231.91	5,821.00	111.29	111.76	-120.48	7,366.80	-537.29	573.65	377.18	196.48	2.920		
13,000.00	5,530.00	13,331.91	5,821.00	112.75	113.21	-120.48	7,466.80	-537.29	573.65	374.61	199.04	2.882		
13,100.00	5,530.00	13,431.91	5,821.00	114.20	114.66	-120.48	7,566.80	-537.29	573.65	372.05	201.60	2.845		
13,200.00	5,530.00	13,531.91	5,821.00	115.65	116.11	-120.48	7,666.80	-537.29	573.65	369.48	204.16	2.810		
13,300.00	5,530.00	13,631.91	5,821.00	117.11	117.57	-120.48	7,766.80	-537.30	573.64	366.92	206.73	2.775		
13,400.00	5,530.00	13,731.91	5,821.00	118.57	119.02	-120.48	7,866.80	-537.30	573.64	364.35	209.29	2.741		
13,500.00	5,530.00	13,831.91	5,821.00	120.02	120.47	-120.48	7,966.80	-537.30	573.64	361.78	211.86	2.708		
13,600.00	5,530.00	13,931.91	5,821.00	121.48	121.92	-120.48	8,066.80	-537.30	573.64	359.21	214.42	2.675		
13,700.00	5,530.00	14,031.91	5,821.00	122.93	123.37	-120.48	8,166.80	-537.30	573.63	356.65	216.99	2.644		
13,800.00	5,530.00	14,131.91	5,821.00	124.39	124.83	-120.48	8,266.80	-537.30	573.63	354.08	219.56	2.613		
13,900.00	5,530.00	14,231.91	5,821.00	125.85	126.28	-120.48	8,366.80	-537.31	573.63	351.51	222.12	2.582		
14,000.00	5,530.00	14,331.91	5,821.00	127.31	127.74	-120.48	8,466.80	-537.31	573.63	348.93	224.69	2.553		
14,100.00	5,530.00	14,431.91	5,821.00	128.76	129.19	-120.48	8,566.80	-537.31	573.62	346.36	227.26	2.524		
14,200.00	5,530.00	14,531.91	5,821.00	130.22	130.65	-120.48	8,666.80	-537.31	573.62	343.79	229.83	2.496		
14,300.00	5,530.00	14,631.91	5,821.00	131.68	132.10	-120.48	8,766.80	-537.31	573.62	341.22	232.40	2.468		
14,400.00	5,530.00	14,731.91	5,821.00	133.14	133.56	-120.48	8,866.80	-537.31	573.62	338.64	234.97	2.441		
14,500.00	5,530.00	14,831.91	5,821.00	134.60	135.01	-120.49	8,966.80	-537.31	573.61	336.07	237.55	2.415		
14,600.00	5,530.00	14,931.91	5,821.00	136.06	136.47	-120.49	9,066.80	-537.32	573.61	333.49	240.12	2.389		
14,700.00	5,530.00	15,031.91	5,821.00	137.52	137.93	-120.49	9,166.80	-537.32	573.61	330.92	242.69	2.364		
14,800.00	5,530.00	15,131.91	5,821.00	138.98	139.38	-120.49	9,266.80	-537.32	573.61	328.34	245.27	2.339		
14,900.00	5,530.00	15,231.91	5,821.00	140.44	140.84	-120.49	9,366.80	-537.32	573.61	325.77	247.84	2.314		
15,000.00	5,530.00	15,331.91	5,821.00	141.90	142.30	-120.49	9,466.80	-537.32	573.60	323.19	250.41	2.291		
15,100.00	5,530.00	15,431.91	5,821.00	143.36	143.76	-120.49	9,566.80	-537.32	573.60	320.61	252.99	2.267		
15,200.00	5,530.00	15,531.91	5,821.00	144.82	145.21	-120.49	9,666.80	-537.33	573.60	318.03	255.56	2.244		
15,300.00	5,530.00	15,631.91	5,821.00	146.28	146.67	-120.49	9,766.80	-537.33	573.60	315.46	258.14	2.222		
15,400.00	5,530.00	15,731.91	5,821.00	147.74	148.13	-120.49	9,866.80	-537.33	573.59	312.88	260.72	2.200		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	Hz	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design Sec 25-T10N-R58W - Razor #25N-2438 - Hz - APD												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
15,500.00	5,530.00	15,831.91	5,821.00	149.20	149.59	-120.49	9,966.80	-537.33	573.59	310.30	263.29	2.179	
15,600.00	5,530.00	15,931.91	5,821.00	150.67	151.05	-120.49	10,066.80	-537.33	573.59	307.72	265.87	2.157	
15,666.10	5,530.00	15,998.00	5,821.00	151.63	152.01	-120.49	10,132.90	-537.33	573.59	306.01	267.57	2.144	
15,691.20	5,530.00	16,022.11	5,821.00	152.00	152.37	-120.49	10,157.00	-537.33	573.59	305.38	268.21	2.139 SF	



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	179.11	-49.59	0.77	49.60				
100.00	100.00	100.00	100.00	0.13	0.13	179.11	-49.59	0.77	49.60	49.33	0.27	186.224	
200.00	200.00	200.00	200.00	0.47	0.47	179.11	-49.59	0.77	49.60	48.66	0.94	52.730	
300.00	300.00	300.00	300.00	0.81	0.81	179.11	-49.59	0.77	49.60	47.99	1.61	30.713	
400.00	399.98	399.14	399.12	1.11	1.12	-10.55	-50.45	-0.72	48.75	46.52	2.23	21.887	
500.00	499.84	498.61	498.47	1.41	1.43	-6.65	-52.83	-4.83	46.13	43.31	2.82	16.358	
600.00	599.59	598.47	598.20	1.72	1.74	-1.89	-55.44	-9.36	42.30	38.86	3.44	12.303	
700.00	699.35	698.33	697.92	2.04	2.07	3.77	-58.06	-13.89	38.82	34.75	4.07	9.528	
800.00	799.11	798.19	797.64	2.37	2.40	10.47	-60.67	-18.41	35.79	31.07	4.72	7.581	
900.00	898.86	898.05	897.36	2.72	2.74	18.26	-63.28	-22.94	33.33	27.95	5.38	6.200	
1,000.00	998.62	997.90	997.09	3.06	3.08	27.11	-65.90	-27.46	31.58	25.54	6.04	5.229	
1,100.00	1,098.38	1,097.76	1,096.81	3.41	3.42	36.72	-68.51	-31.99	30.66	23.94	6.71	4.565	
1,151.95	1,150.20	1,149.64	1,148.62	3.59	3.60	41.87	-69.87	-34.34	30.53	23.46	7.07	4.317 CC	
1,200.00	1,198.13	1,197.62	1,196.53	3.76	3.77	46.64	-71.12	-36.52	30.64	23.23	7.40	4.138 ES	
1,300.00	1,297.89	1,297.48	1,296.25	4.12	4.11	56.28	-73.73	-41.04	31.53	23.42	8.11	3.889	
1,400.00	1,397.65	1,397.34	1,395.97	4.47	4.46	65.16	-76.35	-45.57	33.25	24.43	8.82	3.770	
1,500.00	1,497.40	1,497.20	1,495.70	4.82	4.80	73.00	-78.96	-50.09	35.68	26.15	9.53	3.743	
1,600.00	1,597.16	1,597.06	1,595.42	5.18	5.15	79.74	-81.57	-54.62	38.69	28.45	10.25	3.776	
1,700.00	1,696.91	1,696.92	1,695.14	5.53	5.49	85.43	-84.19	-59.15	42.16	31.20	10.96	3.847	
1,800.00	1,796.67	1,796.78	1,794.86	5.89	5.84	90.23	-86.80	-63.67	45.98	34.31	11.67	3.941	
1,900.00	1,896.43	1,896.64	1,894.59	6.24	6.19	94.26	-89.41	-68.20	50.07	37.69	12.37	4.046	
2,000.00	1,996.18	1,996.50	1,994.31	6.60	6.53	97.67	-92.03	-72.72	54.37	41.29	13.08	4.157	
2,100.00	2,095.94	2,096.36	2,094.03	6.96	6.88	100.58	-94.64	-77.25	58.83	45.05	13.78	4.269	
2,200.00	2,195.70	2,196.22	2,193.75	7.31	7.23	103.07	-97.25	-81.78	63.43	48.94	14.48	4.380	
2,300.00	2,295.45	2,296.07	2,293.48	7.67	7.57	105.22	-99.87	-86.30	68.12	52.94	15.18	4.487	
2,400.00	2,395.21	2,395.93	2,393.20	8.03	7.92	107.09	-102.48	-90.83	72.91	57.02	15.88	4.590	
2,500.00	2,494.97	2,495.79	2,492.92	8.38	8.27	108.73	-105.09	-95.36	77.75	61.17	16.58	4.689	
2,600.00	2,594.72	2,595.65	2,592.64	8.74	8.62	110.17	-107.70	-99.88	82.66	65.38	17.28	4.783	
2,700.00	2,694.48	2,695.51	2,692.37	9.10	8.97	111.45	-110.32	-104.41	87.61	69.63	17.98	4.873	
2,800.00	2,794.23	2,795.37	2,792.09	9.45	9.31	112.60	-112.93	-108.93	92.60	73.92	18.68	4.958	
2,900.00	2,893.99	2,895.23	2,891.81	9.81	9.66	113.63	-115.54	-113.46	97.62	78.25	19.38	5.039	
3,000.00	2,993.75	2,995.09	2,991.53	10.17	10.01	114.55	-118.16	-117.99	102.68	82.60	20.07	5.115	
3,100.00	3,093.50	3,094.95	3,091.25	10.53	10.36	115.39	-120.77	-122.51	107.75	86.98	20.77	5.188	
3,200.00	3,193.26	3,194.81	3,190.98	10.88	10.70	116.16	-123.38	-127.04	112.85	91.38	21.47	5.257	
3,300.00	3,293.02	3,294.67	3,290.70	11.24	11.05	116.86	-126.00	-131.56	117.97	95.80	22.17	5.322	
3,400.00	3,392.77	3,394.53	3,390.42	11.60	11.40	117.49	-128.61	-136.09	123.10	100.23	22.86	5.384	
3,500.00	3,492.53	3,494.38	3,490.14	11.96	11.75	118.08	-131.22	-140.62	128.24	104.68	23.56	5.443	
3,600.00	3,592.39	3,594.29	3,589.91	12.26	12.10	118.04	-133.84	-145.14	132.57	108.36	24.22	5.475	
3,700.00	3,692.37	3,694.19	3,689.67	12.55	12.45	-52.33	-136.45	-149.67	135.31	110.45	24.86	5.443	
3,800.00	3,792.37	3,794.05	3,789.40	12.83	12.79	-54.35	-139.06	-154.20	137.38	111.88	25.51	5.386	
3,900.00	3,892.37	3,893.91	3,889.13	13.08	13.14	-56.30	-141.68	-158.72	139.62	113.51	26.11	5.347	
4,000.00	3,992.37	3,993.78	3,988.85	13.34	13.49	-58.19	-144.29	-163.25	142.02	115.30	26.72	5.315	
4,100.00	4,092.37	4,093.64	4,088.58	13.60	13.84	-60.02	-146.90	-167.78	144.57	117.24	27.33	5.289	
4,200.00	4,192.37	4,193.50	4,188.30	13.86	14.19	-61.78	-149.52	-172.30	147.26	119.32	27.94	5.270	
4,300.00	4,292.37	4,293.37	4,288.03	14.12	14.54	-63.48	-152.13	-176.83	150.09	121.53	28.55	5.256	
4,400.00	4,392.37	4,393.23	4,387.76	14.39	14.88	-65.11	-154.74	-181.36	153.04	123.87	29.17	5.247	
4,500.00	4,492.37	4,493.09	4,487.48	14.66	15.23	-66.68	-157.36	-185.88	156.11	126.33	29.78	5.242	
4,600.00	4,592.37	4,592.96	4,587.21	14.93	15.58	-68.19	-159.97	-190.41	159.29	128.90	30.39	5.241	
4,700.00	4,692.37	4,692.82	4,686.93	15.21	15.93	-69.64	-162.58	-194.93	162.59	131.58	31.01	5.243	
4,800.00	4,792.37	4,792.68	4,786.66	15.49	16.28	-71.03	-165.20	-199.46	165.98	134.35	31.63	5.248	
4,900.00	4,892.37	4,892.54	4,886.39	15.77	16.63	-72.36	-167.81	-203.99	169.46	137.22	32.24	5.256	
5,000.00	4,992.37	4,996.39	4,990.16	16.05	16.94	-73.30	-169.72	-207.29	171.96	139.13	32.83	5.238	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	Hz	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.00	5,092.01	5,098.25	5,092.01	16.32	17.20	-75.73	-169.97	-207.72	170.52	137.17	33.35	5.114		
5,200.00	5,188.61	5,194.85	5,188.61	16.57	17.46	-84.39	-169.97	-207.72	166.03	132.25	33.78	4.915		
5,247.73	5,232.60	5,238.86	5,232.60	16.67	17.58	-90.00	-168.76	-207.72	165.13	131.18	33.95	4.864		
5,300.00	5,278.61	5,288.36	5,281.75	16.79	17.72	-96.20	-163.05	-207.72	166.25	132.18	34.07	4.879		
5,400.00	5,358.71	5,388.51	5,378.40	17.01	17.98	-107.64	-137.41	-207.72	174.54	140.56	33.99	5.136		
5,500.00	5,425.97	5,497.33	5,475.73	17.24	18.25	-117.77	-89.20	-207.72	189.53	156.19	33.33	5.686		
5,600.00	5,477.90	5,616.73	5,568.45	17.52	18.51	-126.08	-14.38	-207.72	208.31	176.05	32.27	6.456		
5,700.00	5,512.61	5,748.27	5,647.94	17.86	18.76	-132.42	89.99	-207.72	227.40	196.20	31.20	7.289		
5,800.00	5,528.82	5,892.26	5,702.04	18.27	19.19	-136.79	222.93	-207.72	243.29	212.66	30.63	7.942		
5,900.00	5,530.00	6,037.46	5,718.00	18.76	19.87	-138.71	366.81	-207.72	250.21	219.30	30.90	8.097		
6,000.00	5,530.00	6,137.46	5,718.00	19.35	20.45	-138.71	466.81	-207.71	250.20	218.58	31.63	7.911		
6,100.00	5,530.00	6,237.46	5,718.00	20.03	21.11	-138.71	566.81	-207.71	250.20	217.73	32.47	7.706		
6,200.00	5,530.00	6,337.46	5,718.00	20.79	21.85	-138.72	666.81	-207.71	250.19	216.77	33.42	7.486		
6,300.00	5,530.00	6,437.46	5,718.00	21.63	22.66	-138.72	766.81	-207.71	250.19	215.71	34.48	7.257		
6,400.00	5,530.00	6,537.46	5,718.00	22.53	23.53	-138.72	866.81	-207.71	250.19	214.56	35.63	7.023		
6,500.00	5,530.00	6,637.46	5,718.00	23.49	24.46	-138.72	966.81	-207.71	250.18	213.32	36.86	6.787		
6,600.00	5,530.00	6,737.46	5,718.00	24.50	25.44	-138.72	1,066.81	-207.70	250.18	212.01	38.17	6.554		
6,700.00	5,530.00	6,837.46	5,718.00	25.55	26.47	-138.72	1,166.81	-207.70	250.17	210.63	39.55	6.326		
6,800.00	5,530.00	6,937.46	5,718.00	26.65	27.54	-138.72	1,266.81	-207.70	250.17	209.18	40.99	6.103		
6,900.00	5,530.00	7,037.46	5,718.00	27.77	28.64	-138.72	1,366.81	-207.70	250.17	207.68	42.49	5.888		
7,000.00	5,530.00	7,137.46	5,718.00	28.93	29.78	-138.72	1,466.81	-207.70	250.16	206.13	44.03	5.681		
7,100.00	5,530.00	7,237.46	5,718.00	30.12	30.94	-138.72	1,566.81	-207.70	250.16	204.53	45.63	5.483		
7,200.00	5,530.00	7,337.46	5,718.00	31.33	32.13	-138.73	1,666.81	-207.69	250.16	202.90	47.26	5.293		
7,300.00	5,530.00	7,437.46	5,718.00	32.57	33.34	-138.73	1,766.81	-207.69	250.15	201.22	48.93	5.113		
7,400.00	5,530.00	7,537.46	5,718.00	33.82	34.58	-138.73	1,866.81	-207.69	250.15	199.52	50.63	4.941		
7,500.00	5,530.00	7,637.46	5,718.00	35.09	35.83	-138.73	1,966.81	-207.69	250.14	197.78	52.36	4.777		
7,600.00	5,530.00	7,737.46	5,718.00	36.37	37.09	-138.73	2,066.81	-207.69	250.14	196.02	54.12	4.622		
7,700.00	5,530.00	7,837.46	5,718.00	37.67	38.37	-138.73	2,166.81	-207.69	250.14	194.24	55.90	4.475		
7,800.00	5,530.00	7,937.46	5,718.00	38.98	39.67	-138.73	2,266.81	-207.68	250.13	192.43	57.70	4.335		
7,900.00	5,530.00	8,037.46	5,718.00	40.30	40.97	-138.73	2,366.81	-207.68	250.13	190.60	59.52	4.202		
8,000.00	5,530.00	8,137.46	5,718.00	41.63	42.29	-138.73	2,466.81	-207.68	250.12	188.76	61.36	4.076		
8,100.00	5,530.00	8,237.46	5,718.00	42.97	43.62	-138.74	2,566.81	-207.68	250.12	186.90	63.22	3.956		
8,200.00	5,530.00	8,337.46	5,718.00	44.32	44.95	-138.74	2,666.81	-207.68	250.12	185.02	65.10	3.842		
8,300.00	5,530.00	8,437.46	5,718.00	45.68	46.30	-138.74	2,766.81	-207.68	250.11	183.13	66.98	3.734		
8,400.00	5,530.00	8,537.46	5,718.00	47.04	47.65	-138.74	2,866.81	-207.67	250.11	181.23	68.88	3.631		
8,500.00	5,530.00	8,637.46	5,718.00	48.41	49.01	-138.74	2,966.81	-207.67	250.10	179.31	70.79	3.533		
8,600.00	5,530.00	8,737.46	5,718.00	49.79	50.37	-138.74	3,066.81	-207.67	250.10	177.38	72.71	3.439		
8,700.00	5,530.00	8,837.46	5,718.00	51.17	51.74	-138.74	3,166.81	-207.67	250.10	175.45	74.65	3.350		
8,800.00	5,530.00	8,937.46	5,718.00	52.56	53.12	-138.74	3,266.81	-207.67	250.09	173.50	76.59	3.265		
8,900.00	5,530.00	9,037.46	5,718.00	53.95	54.50	-138.74	3,366.81	-207.67	250.09	171.55	78.54	3.184		
9,000.00	5,530.00	9,137.46	5,718.00	55.34	55.88	-138.74	3,466.81	-207.66	250.08	169.59	80.49	3.107		
9,100.00	5,530.00	9,237.46	5,718.00	56.74	57.27	-138.75	3,566.81	-207.66	250.08	167.62	82.46	3.033		
9,200.00	5,530.00	9,337.46	5,718.00	58.14	58.67	-138.75	3,666.81	-207.66	250.08	165.65	84.43	2.962		
9,300.00	5,530.00	9,437.46	5,718.00	59.55	60.07	-138.75	3,766.81	-207.66	250.07	163.66	86.41	2.894		
9,400.00	5,530.00	9,537.46	5,718.00	60.96	61.47	-138.75	3,866.81	-207.66	250.07	161.68	88.39	2.829		
9,500.00	5,530.00	9,637.46	5,718.00	62.37	62.87	-138.75	3,966.81	-207.66	250.06	159.68	90.38	2.767		
9,600.00	5,530.00	9,737.46	5,718.00	63.78	64.28	-138.75	4,066.81	-207.65	250.06	157.69	92.37	2.707		
9,700.00	5,530.00	9,837.46	5,718.00	65.20	65.69	-138.75	4,166.81	-207.65	250.06	155.68	94.37	2.650		
9,800.00	5,530.00	9,937.46	5,718.00	66.62	67.10	-138.75	4,266.81	-207.65	250.05	153.68	96.37	2.595		
9,900.00	5,530.00	10,037.46	5,718.00	68.04	68.52	-138.75	4,366.81	-207.65	250.05	151.67	98.38	2.542		
10,000.00	5,530.00	10,137.46	5,718.00	69.46	69.93	-138.76	4,466.81	-207.65	250.04	149.65	100.39	2.491		
10,100.00	5,530.00	10,237.46	5,718.00	70.89	71.35	-138.76	4,566.81	-207.65	250.04	147.63	102.41	2.442		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,200.00	5,530.00	10,337.46	5,718.00	72.32	72.78	-138.76	4,666.81	-207.64	250.04	145.61	104.43	2.394		
10,300.00	5,530.00	10,437.46	5,718.00	73.74	74.20	-138.76	4,766.81	-207.64	250.03	143.58	106.45	2.349		
10,400.00	5,530.00	10,537.46	5,718.00	75.18	75.63	-138.76	4,866.81	-207.64	250.03	141.55	108.47	2.305		
10,500.00	5,530.00	10,637.46	5,718.00	76.61	77.05	-138.76	4,966.81	-207.64	250.02	139.52	110.50	2.263		
10,600.00	5,530.00	10,737.46	5,718.00	78.04	78.48	-138.76	5,066.81	-207.64	250.02	137.49	112.53	2.222		
10,700.00	5,530.00	10,837.46	5,718.00	79.48	79.91	-138.76	5,166.81	-207.64	250.02	135.45	114.57	2.182		
10,800.00	5,530.00	10,937.46	5,718.00	80.91	81.35	-138.76	5,266.81	-207.63	250.01	133.41	116.60	2.144		
10,900.00	5,530.00	11,037.46	5,718.00	82.35	82.78	-138.76	5,366.81	-207.63	250.01	131.37	118.64	2.107		
11,000.00	5,530.00	11,137.46	5,718.00	83.79	84.21	-138.77	5,466.81	-207.63	250.00	129.32	120.68	2.072		
11,100.00	5,530.00	11,237.46	5,718.00	85.23	85.65	-138.77	5,566.81	-207.63	250.00	127.28	122.72	2.037		
11,200.00	5,530.00	11,337.46	5,718.00	86.67	87.09	-138.77	5,666.81	-207.63	250.00	125.23	124.77	2.004		
11,300.00	5,530.00	11,437.46	5,718.00	88.11	88.52	-138.77	5,766.81	-207.63	249.99	123.18	126.81	1.971		
11,400.00	5,530.00	11,537.46	5,718.00	89.56	89.96	-138.77	5,866.81	-207.62	249.99	121.13	128.86	1.940		
11,500.00	5,530.00	11,637.46	5,718.00	91.00	91.40	-138.77	5,966.81	-207.62	249.98	119.07	130.91	1.910		
11,600.00	5,530.00	11,737.46	5,718.00	92.45	92.85	-138.77	6,066.81	-207.62	249.98	117.02	132.96	1.880		
11,700.00	5,530.00	11,837.46	5,718.00	93.89	94.29	-138.77	6,166.81	-207.62	249.98	114.96	135.02	1.851		
11,800.00	5,530.00	11,937.46	5,718.00	95.34	95.73	-138.77	6,266.81	-207.62	249.97	112.90	137.07	1.824		
11,900.00	5,530.00	12,037.46	5,718.00	96.78	97.18	-138.77	6,366.81	-207.62	249.97	110.84	139.13	1.797		
12,000.00	5,530.00	12,137.46	5,718.00	98.23	98.62	-138.78	6,466.81	-207.61	249.96	108.78	141.19	1.770		
12,100.00	5,530.00	12,237.46	5,718.00	99.68	100.07	-138.78	6,566.81	-207.61	249.96	106.72	143.24	1.745		
12,200.00	5,530.00	12,337.46	5,718.00	101.13	101.51	-138.78	6,666.81	-207.61	249.96	104.65	145.30	1.720		
12,300.00	5,530.00	12,437.46	5,718.00	102.58	102.96	-138.78	6,766.81	-207.61	249.95	102.59	147.37	1.696		
12,400.00	5,530.00	12,537.46	5,718.00	104.03	104.41	-138.78	6,866.81	-207.61	249.95	100.52	149.43	1.673		
12,500.00	5,530.00	12,637.46	5,718.00	105.48	105.86	-138.78	6,966.81	-207.61	249.94	98.45	151.49	1.650		
12,600.00	5,530.00	12,737.46	5,718.00	106.93	107.31	-138.78	7,066.81	-207.60	249.94	96.38	153.56	1.628		
12,700.00	5,530.00	12,837.46	5,718.00	108.39	108.76	-138.78	7,166.81	-207.60	249.94	94.32	155.62	1.606		
12,800.00	5,530.00	12,937.46	5,718.00	109.84	110.21	-138.78	7,266.81	-207.60	249.93	92.24	157.69	1.585		
12,900.00	5,530.00	13,037.46	5,718.00	111.29	111.66	-138.79	7,366.81	-207.60	249.93	90.17	159.75	1.564		
13,000.00	5,530.00	13,137.46	5,718.00	112.75	113.11	-138.79	7,466.81	-207.60	249.92	88.10	161.82	1.544		
13,100.00	5,530.00	13,237.46	5,718.00	114.20	114.56	-138.79	7,566.81	-207.60	249.92	86.03	163.89	1.525		
13,200.00	5,530.00	13,337.46	5,718.00	115.65	116.01	-138.79	7,666.81	-207.59	249.92	83.95	165.96	1.506		
13,300.00	5,530.00	13,437.46	5,718.00	117.11	117.47	-138.79	7,766.81	-207.59	249.91	81.88	168.03	1.487 Level 3		
13,400.00	5,530.00	13,537.46	5,718.00	118.57	118.92	-138.79	7,866.81	-207.59	249.91	79.80	170.10	1.469 Level 3		
13,500.00	5,530.00	13,637.46	5,718.00	120.02	120.37	-138.79	7,966.81	-207.59	249.90	77.73	172.18	1.451 Level 3		
13,600.00	5,530.00	13,737.46	5,718.00	121.48	121.83	-138.79	8,066.81	-207.59	249.90	75.65	174.25	1.434 Level 3		
13,700.00	5,530.00	13,837.46	5,718.00	122.93	123.28	-138.79	8,166.81	-207.59	249.90	73.57	176.32	1.417 Level 3		
13,800.00	5,530.00	13,937.46	5,718.00	124.39	124.74	-138.79	8,266.81	-207.58	249.89	71.50	178.40	1.401 Level 3		
13,900.00	5,530.00	14,037.46	5,718.00	125.85	126.19	-138.80	8,366.81	-207.58	249.89	69.42	180.47	1.385 Level 3		
14,000.00	5,530.00	14,137.46	5,718.00	127.31	127.65	-138.80	8,466.81	-207.58	249.88	67.34	182.55	1.369 Level 3		
14,100.00	5,530.00	14,237.46	5,718.00	128.76	129.10	-138.80	8,566.81	-207.58	249.88	65.26	184.62	1.353 Level 3		
14,200.00	5,530.00	14,337.46	5,718.00	130.22	130.56	-138.80	8,666.81	-207.58	249.88	63.18	186.70	1.338 Level 3		
14,300.00	5,530.00	14,437.46	5,718.00	131.68	132.02	-138.80	8,766.81	-207.58	249.87	61.10	188.77	1.324 Level 3		
14,400.00	5,530.00	14,537.46	5,718.00	133.14	133.47	-138.80	8,866.81	-207.58	249.87	59.02	190.85	1.309 Level 3		
14,500.00	5,530.00	14,637.46	5,718.00	134.60	134.93	-138.80	8,966.81	-207.57	249.86	56.94	192.93	1.295 Level 3		
14,600.00	5,530.00	14,737.46	5,718.00	136.06	136.39	-138.80	9,066.81	-207.57	249.86	54.85	195.01	1.281 Level 3		
14,700.00	5,530.00	14,837.46	5,718.00	137.52	137.85	-138.80	9,166.81	-207.57	249.86	52.77	197.09	1.268 Level 3		
14,800.00	5,530.00	14,937.46	5,718.00	138.98	139.31	-138.80	9,266.81	-207.57	249.85	50.69	199.17	1.254 Level 3		
14,900.00	5,530.00	15,037.46	5,718.00	140.44	140.76	-138.81	9,366.81	-207.57	249.85	48.60	201.25	1.242 Level 2		
15,000.00	5,530.00	15,137.46	5,718.00	141.90	142.22	-138.81	9,466.81	-207.57	249.85	46.52	203.33	1.229 Level 2		
15,100.00	5,530.00	15,237.46	5,718.00	143.36	143.68	-138.81	9,566.81	-207.56	249.84	44.44	205.41	1.216 Level 2		
15,200.00	5,530.00	15,337.46	5,718.00	144.82	145.14	-138.81	9,666.81	-207.56	249.84	42.35	207.49	1.204 Level 2		
15,300.00	5,530.00	15,437.46	5,718.00	146.28	146.60	-138.81	9,766.81	-207.56	249.83	40.27	209.57	1.192 Level 2		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	Hz	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design Sec 25-T10N-R58W - Razor #25N-2439 - Hz - APD												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
15,400.00	5,530.00	15,537.46	5,718.00	147.74	148.06	-138.81	9,866.81	-207.56	249.83	38.18	211.65	1.180	Level 2
15,500.00	5,530.00	15,637.46	5,718.00	149.20	149.52	-138.81	9,966.81	-207.56	249.83	36.09	213.73	1.169	Level 2
15,600.00	5,530.00	15,737.46	5,718.00	150.67	150.98	-138.81	10,066.81	-207.56	249.82	34.01	215.81	1.158	Level 2
15,691.20	5,530.00	15,828.65	5,718.00	152.00	152.31	-138.81	10,158.01	-207.55	249.82	32.11	217.71	1.147	Level 2, SF



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	148.19	-49.59	30.76	58.36					
100.00	100.00	100.00	100.00	0.13	0.13	148.19	-49.59	30.76	58.36	58.09	0.27	219.099		
200.00	200.00	200.00	200.00	0.47	0.47	148.19	-49.59	30.76	58.36	57.42	0.94	62.039		
300.00	300.00	300.00	300.00	0.81	0.81	148.19	-49.59	30.76	58.36	56.74	1.61	36.135 CC		
400.00	399.98	398.01	397.99	1.11	1.10	-43.75	-51.11	31.47	58.78	56.57	2.21	26.584 ES		
500.00	499.84	495.95	495.80	1.41	1.40	-46.46	-55.66	33.59	60.15	57.37	2.79	21.597		
600.00	599.59	595.77	595.38	1.72	1.71	-49.94	-61.97	36.53	62.32	58.92	3.40	18.318		
700.00	699.35	695.68	695.04	2.04	2.03	-53.17	-68.29	39.48	64.71	60.67	4.04	16.003		
800.00	799.11	795.59	794.70	2.37	2.37	-56.17	-74.60	42.42	67.29	62.59	4.70	14.312		
900.00	898.86	895.49	894.37	2.72	2.71	-58.94	-80.92	45.37	70.04	64.67	5.37	13.038		
1,000.00	998.62	995.40	994.03	3.06	3.06	-61.50	-87.23	48.32	72.94	66.89	6.05	12.054		
1,100.00	1,098.38	1,095.31	1,093.69	3.41	3.41	-63.85	-93.55	51.26	75.98	69.24	6.74	11.278		
1,200.00	1,198.13	1,195.21	1,193.36	3.76	3.76	-66.03	-99.87	54.21	79.13	71.70	7.43	10.653		
1,300.00	1,297.89	1,295.12	1,293.02	4.12	4.11	-68.03	-106.18	57.15	82.39	74.26	8.12	10.143		
1,400.00	1,397.65	1,395.03	1,392.69	4.47	4.46	-69.88	-112.50	60.10	85.74	76.92	8.82	9.720		
1,500.00	1,497.40	1,494.94	1,492.35	4.82	4.81	-71.58	-118.82	63.04	89.17	79.65	9.52	9.365		
1,600.00	1,597.16	1,594.84	1,592.01	5.18	5.17	-73.16	-125.13	65.99	92.68	82.45	10.23	9.064		
1,700.00	1,696.91	1,694.75	1,691.68	5.53	5.52	-74.63	-131.45	68.93	96.25	85.32	10.93	8.806		
1,800.00	1,796.67	1,794.66	1,791.34	5.89	5.87	-75.99	-137.76	71.88	99.88	88.24	11.64	8.583		
1,900.00	1,896.43	1,894.56	1,891.00	6.24	6.23	-77.25	-144.08	74.82	103.56	91.22	12.34	8.389		
2,000.00	1,996.18	1,994.47	1,990.67	6.60	6.58	-78.42	-150.40	77.77	107.29	94.24	13.05	8.220		
2,100.00	2,095.94	2,094.38	2,090.33	6.96	6.94	-79.52	-156.71	80.71	111.06	97.30	13.76	8.070		
2,200.00	2,195.70	2,194.29	2,190.00	7.31	7.29	-80.54	-163.03	83.66	114.87	100.40	14.47	7.937		
2,300.00	2,295.45	2,294.19	2,289.66	7.67	7.65	-81.50	-169.35	86.60	118.72	103.53	15.18	7.819		
2,400.00	2,395.21	2,394.10	2,389.32	8.03	8.01	-82.40	-175.66	89.55	122.59	106.70	15.89	7.713		
2,500.00	2,494.97	2,494.01	2,488.99	8.38	8.36	-83.24	-181.98	92.49	126.49	109.89	16.61	7.617		
2,600.00	2,594.72	2,593.91	2,588.65	8.74	8.72	-84.03	-188.29	95.44	130.42	113.10	17.32	7.531		
2,700.00	2,694.48	2,693.82	2,688.31	9.10	9.07	-84.78	-194.61	98.39	134.37	116.34	18.03	7.453		
2,800.00	2,794.23	2,793.73	2,787.98	9.45	9.43	-85.48	-200.93	101.33	138.35	119.60	18.74	7.381		
2,900.00	2,893.99	2,893.63	2,887.64	9.81	9.79	-86.14	-207.24	104.28	142.34	122.88	19.46	7.316		
3,000.00	2,993.75	2,993.54	2,987.31	10.17	10.14	-86.77	-213.56	107.22	146.35	126.18	20.17	7.257		
3,100.00	3,093.50	3,093.45	3,086.97	10.53	10.50	-87.36	-219.88	110.17	150.38	129.50	20.88	7.202		
3,200.00	3,193.26	3,193.36	3,186.63	10.88	10.86	-87.93	-226.19	113.11	154.42	132.83	21.59	7.151		
3,300.00	3,293.02	3,293.26	3,286.30	11.24	11.21	-88.46	-232.51	116.06	158.48	136.17	22.31	7.104		
3,400.00	3,392.77	3,393.17	3,385.96	11.60	11.57	-88.97	-238.82	119.00	162.55	139.53	23.02	7.061		
3,500.00	3,492.53	3,495.50	3,488.09	11.96	11.90	-89.70	-244.51	121.65	166.13	142.42	23.71	7.007		
3,600.00	3,592.39	3,598.96	3,591.51	12.26	12.16	-90.81	-247.05	122.84	167.74	143.46	24.28	6.908		
3,700.00	3,692.37	3,699.82	3,692.37	12.55	12.45	99.62	-247.16	122.89	167.84	142.97	24.87	6.750		
3,800.00	3,792.37	3,799.82	3,792.37	12.83	12.71	99.62	-247.16	122.89	167.84	142.43	25.41	6.605		
3,900.00	3,892.37	3,899.82	3,892.37	13.08	12.97	99.62	-247.16	122.89	167.84	141.92	25.93	6.474		
4,000.00	3,992.37	3,999.82	3,992.37	13.34	13.23	99.62	-247.16	122.89	167.84	141.40	26.45	6.347		
4,100.00	4,092.37	4,099.82	4,092.37	13.60	13.50	99.62	-247.16	122.89	167.84	140.87	26.97	6.223		
4,200.00	4,192.37	4,199.82	4,192.37	13.86	13.77	99.62	-247.16	122.89	167.84	140.34	27.51	6.102		
4,300.00	4,292.37	4,299.82	4,292.37	14.12	14.04	99.62	-247.16	122.89	167.84	139.80	28.05	5.985		
4,400.00	4,392.37	4,399.82	4,392.37	14.39	14.32	99.62	-247.16	122.89	167.84	139.25	28.59	5.871		
4,500.00	4,492.37	4,499.82	4,492.37	14.66	14.60	99.62	-247.16	122.89	167.84	138.70	29.14	5.760		
4,600.00	4,592.37	4,599.82	4,592.37	14.93	14.88	99.62	-247.16	122.89	167.84	138.14	29.70	5.652		
4,700.00	4,692.37	4,699.82	4,692.37	15.21	15.16	99.62	-247.16	122.89	167.84	137.58	30.26	5.547		
4,800.00	4,792.37	4,799.82	4,792.37	15.49	15.45	99.62	-247.16	122.89	167.84	137.02	30.82	5.445		
4,900.00	4,892.37	4,899.82	4,892.37	15.77	15.74	99.62	-247.16	122.89	167.84	136.45	31.39	5.347		
5,000.00	4,992.37	4,999.82	4,992.37	16.05	16.03	99.62	-247.16	122.89	167.84	135.88	31.97	5.251		
5,100.00	5,092.01	5,099.46	5,092.01	16.32	16.32	101.69	-247.16	122.89	169.08	136.58	32.50	5.202		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	Hz	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,200.00	5,188.61	5,196.06	5,188.61	16.57	16.60	108.78	-247.16	122.89	176.00	143.15	32.86	5.357		
5,300.00	5,278.61	5,286.06	5,278.61	16.79	16.87	118.08	-247.16	122.89	195.01	162.22	32.80	5.946		
5,400.00	5,358.71	5,392.05	5,384.23	17.01	17.17	128.73	-240.33	122.89	228.81	196.77	32.05	7.140		
5,500.00	5,425.97	5,524.64	5,510.96	17.24	17.51	137.90	-202.58	122.89	267.35	236.65	30.70	8.708		
5,600.00	5,477.90	5,687.35	5,647.13	17.52	17.89	144.83	-114.74	122.88	303.17	273.98	29.18	10.388		
5,700.00	5,512.61	5,885.94	5,766.76	17.86	18.36	149.23	42.27	122.87	328.42	300.34	28.07	11.698		
5,800.00	5,528.82	6,110.12	5,820.76	18.27	19.18	150.45	258.08	122.86	335.69	307.64	28.04	11.970		
5,883.79	5,532.09	6,202.61	5,821.00	18.68	19.62	150.20	350.55	122.85	332.94	304.44	28.50	11.682		
5,900.00	5,530.00	6,218.87	5,821.00	18.76	19.71	150.38	366.82	122.85	334.76	306.21	28.55	11.726		
6,000.00	5,530.00	6,318.87	5,821.00	19.35	20.30	150.38	466.82	122.84	334.76	305.66	29.10	11.504		
6,100.00	5,530.00	6,418.87	5,821.00	20.03	20.98	150.38	566.82	122.84	334.76	305.02	29.74	11.256		
6,200.00	5,530.00	6,518.87	5,821.00	20.79	21.73	150.38	666.82	122.83	334.76	304.29	30.46	10.988		
6,300.00	5,530.00	6,618.87	5,821.00	21.63	22.56	150.38	766.82	122.83	334.75	303.49	31.27	10.706		
6,400.00	5,530.00	6,718.87	5,821.00	22.53	23.45	150.38	866.82	122.82	334.75	302.61	32.14	10.414		
6,500.00	5,530.00	6,818.87	5,821.00	23.49	24.39	150.38	966.82	122.81	334.75	301.67	33.09	10.118		
6,600.00	5,530.00	6,918.87	5,821.00	24.50	25.39	150.38	1,066.82	122.81	334.75	300.66	34.09	9.820		
6,700.00	5,530.00	7,018.87	5,821.00	25.55	26.43	150.38	1,166.82	122.80	334.75	299.60	35.15	9.524		
6,800.00	5,530.00	7,118.87	5,821.00	26.65	27.51	150.38	1,266.82	122.79	334.75	298.49	36.26	9.232		
6,900.00	5,530.00	7,218.87	5,821.00	27.77	28.62	150.38	1,366.82	122.79	334.75	297.33	37.42	8.946		
7,000.00	5,530.00	7,318.87	5,821.00	28.93	29.77	150.38	1,466.82	122.78	334.75	296.13	38.62	8.669		
7,100.00	5,530.00	7,418.87	5,821.00	30.12	30.94	150.38	1,566.82	122.77	334.75	294.89	39.85	8.399		
7,200.00	5,530.00	7,518.87	5,821.00	31.33	32.14	150.38	1,666.82	122.77	334.75	293.62	41.13	8.139		
7,300.00	5,530.00	7,618.87	5,821.00	32.57	33.36	150.38	1,766.82	122.76	334.74	292.31	42.43	7.889		
7,400.00	5,530.00	7,718.87	5,821.00	33.82	34.60	150.38	1,866.82	122.76	334.74	290.98	43.77	7.648		
7,500.00	5,530.00	7,818.87	5,821.00	35.09	35.86	150.38	1,966.82	122.75	334.74	289.62	45.13	7.418		
7,600.00	5,530.00	7,918.87	5,821.00	36.37	37.13	150.38	2,066.82	122.74	334.74	288.23	46.51	7.197		
7,700.00	5,530.00	8,018.87	5,821.00	37.67	38.41	150.38	2,166.82	122.74	334.74	286.82	47.92	6.986		
7,800.00	5,530.00	8,118.87	5,821.00	38.98	39.71	150.38	2,266.82	122.73	334.74	285.40	49.34	6.784		
7,900.00	5,530.00	8,218.87	5,821.00	40.30	41.03	150.38	2,366.82	122.72	334.74	283.95	50.79	6.591		
8,000.00	5,530.00	8,318.87	5,821.00	41.63	42.35	150.38	2,466.82	122.72	334.74	282.49	52.25	6.406		
8,100.00	5,530.00	8,418.87	5,821.00	42.97	43.68	150.38	2,566.82	122.71	334.74	281.01	53.73	6.230		
8,200.00	5,530.00	8,518.87	5,821.00	44.32	45.02	150.38	2,666.82	122.70	334.74	279.52	55.22	6.062		
8,300.00	5,530.00	8,618.87	5,821.00	45.68	46.37	150.38	2,766.82	122.70	334.73	278.01	56.72	5.901		
8,400.00	5,530.00	8,718.87	5,821.00	47.04	47.72	150.38	2,866.82	122.69	334.73	276.49	58.24	5.747		
8,500.00	5,530.00	8,818.87	5,821.00	48.41	49.09	150.38	2,966.82	122.69	334.73	274.96	59.77	5.600		
8,600.00	5,530.00	8,918.87	5,821.00	49.79	50.45	150.38	3,066.82	122.68	334.73	273.42	61.31	5.460		
8,700.00	5,530.00	9,018.87	5,821.00	51.17	51.83	150.38	3,166.82	122.67	334.73	271.87	62.86	5.325		
8,800.00	5,530.00	9,118.87	5,821.00	52.56	53.21	150.39	3,266.82	122.67	334.73	270.32	64.41	5.197		
8,900.00	5,530.00	9,218.87	5,821.00	53.95	54.59	150.39	3,366.82	122.66	334.73	268.75	65.98	5.073		
9,000.00	5,530.00	9,318.87	5,821.00	55.34	55.98	150.39	3,466.82	122.65	334.73	267.18	67.55	4.955		
9,100.00	5,530.00	9,418.87	5,821.00	56.74	57.37	150.39	3,566.82	122.65	334.73	265.59	69.13	4.842		
9,200.00	5,530.00	9,518.87	5,821.00	58.14	58.77	150.39	3,666.82	122.64	334.73	264.01	70.72	4.733		
9,300.00	5,530.00	9,618.87	5,821.00	59.55	60.17	150.39	3,766.82	122.63	334.72	262.41	72.31	4.629		
9,400.00	5,530.00	9,718.87	5,821.00	60.96	61.57	150.39	3,866.82	122.63	334.72	260.81	73.91	4.529		
9,500.00	5,530.00	9,818.87	5,821.00	62.37	62.98	150.39	3,966.82	122.62	334.72	259.21	75.52	4.432		
9,600.00	5,530.00	9,918.87	5,821.00	63.78	64.39	150.39	4,066.82	122.61	334.72	257.60	77.13	4.340		
9,700.00	5,530.00	10,018.87	5,821.00	65.20	65.80	150.39	4,166.82	122.61	334.72	255.98	78.74	4.251		
9,800.00	5,530.00	10,118.87	5,821.00	66.62	67.22	150.39	4,266.82	122.60	334.72	254.36	80.36	4.165		
9,900.00	5,530.00	10,218.87	5,821.00	68.04	68.63	150.39	4,366.82	122.60	334.72	252.74	81.98	4.083		
10,000.00	5,530.00	10,318.87	5,821.00	69.46	70.05	150.39	4,466.82	122.59	334.72	251.11	83.61	4.003		
10,100.00	5,530.00	10,418.87	5,821.00	70.89	71.47	150.39	4,566.82	122.58	334.72	249.48	85.24	3.927		
10,200.00	5,530.00	10,518.87	5,821.00	72.32	72.90	150.39	4,666.82	122.58	334.72	247.84	86.88	3.853		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,300.00	5,530.00	10,618.87	5,821.00	73.74	74.32	150.39	4,766.82	122.57	334.71	246.20	88.51	3.782		
10,400.00	5,530.00	10,718.87	5,821.00	75.18	75.75	150.39	4,866.82	122.56	334.71	244.56	90.15	3.713		
10,500.00	5,530.00	10,818.87	5,821.00	76.61	77.18	150.39	4,966.82	122.56	334.71	242.91	91.80	3.646		
10,600.00	5,530.00	10,918.87	5,821.00	78.04	78.61	150.39	5,066.82	122.55	334.71	241.27	93.45	3.582		
10,700.00	5,530.00	11,018.87	5,821.00	79.48	80.04	150.39	5,166.82	122.54	334.71	239.62	95.09	3.520		
10,800.00	5,530.00	11,118.87	5,821.00	80.91	81.47	150.39	5,266.82	122.54	334.71	237.96	96.75	3.460		
10,900.00	5,530.00	11,218.87	5,821.00	82.35	82.91	150.39	5,366.82	122.53	334.71	236.31	98.40	3.401		
11,000.00	5,530.00	11,318.87	5,821.00	83.79	84.34	150.39	5,466.82	122.53	334.71	234.65	100.06	3.345		
11,100.00	5,530.00	11,418.87	5,821.00	85.23	85.78	150.39	5,566.82	122.52	334.71	232.99	101.72	3.291		
11,200.00	5,530.00	11,518.87	5,821.00	86.67	87.22	150.39	5,666.82	122.51	334.71	231.33	103.38	3.238		
11,300.00	5,530.00	11,618.87	5,821.00	88.11	88.66	150.39	5,766.82	122.51	334.70	229.66	105.04	3.186		
11,400.00	5,530.00	11,718.87	5,821.00	89.56	90.10	150.39	5,866.82	122.50	334.70	228.00	106.71	3.137		
11,500.00	5,530.00	11,818.87	5,821.00	91.00	91.54	150.39	5,966.82	122.49	334.70	226.33	108.37	3.088		
11,600.00	5,530.00	11,918.87	5,821.00	92.45	92.98	150.39	6,066.82	122.49	334.70	224.66	110.04	3.042		
11,700.00	5,530.00	12,018.87	5,821.00	93.89	94.43	150.39	6,166.82	122.48	334.70	222.99	111.71	2.996		
11,800.00	5,530.00	12,118.87	5,821.00	95.34	95.87	150.39	6,266.82	122.47	334.70	221.31	113.38	2.952		
11,900.00	5,530.00	12,218.87	5,821.00	96.78	97.32	150.39	6,366.82	122.47	334.70	219.64	115.06	2.909		
12,000.00	5,530.00	12,318.87	5,821.00	98.23	98.76	150.39	6,466.82	122.46	334.70	217.96	116.73	2.867		
12,100.00	5,530.00	12,418.87	5,821.00	99.68	100.21	150.39	6,566.82	122.46	334.70	216.29	118.41	2.827		
12,200.00	5,530.00	12,518.87	5,821.00	101.13	101.66	150.40	6,666.82	122.45	334.70	214.61	120.09	2.787		
12,300.00	5,530.00	12,618.87	5,821.00	102.58	103.10	150.40	6,766.82	122.44	334.69	212.93	121.77	2.749		
12,400.00	5,530.00	12,718.87	5,821.00	104.03	104.55	150.40	6,866.82	122.44	334.69	211.25	123.45	2.711		
12,500.00	5,530.00	12,818.87	5,821.00	105.48	106.00	150.40	6,966.82	122.43	334.69	209.57	125.13	2.675		
12,600.00	5,530.00	12,918.87	5,821.00	106.93	107.45	150.40	7,066.82	122.42	334.69	207.88	126.81	2.639		
12,700.00	5,530.00	13,018.87	5,821.00	108.39	108.90	150.40	7,166.82	122.42	334.69	206.20	128.49	2.605		
12,800.00	5,530.00	13,118.87	5,821.00	109.84	110.35	150.40	7,266.82	122.41	334.69	204.51	130.18	2.571		
12,900.00	5,530.00	13,218.87	5,821.00	111.29	111.81	150.40	7,366.82	122.40	334.69	202.83	131.86	2.538		
13,000.00	5,530.00	13,318.87	5,821.00	112.75	113.26	150.40	7,466.82	122.40	334.69	201.14	133.55	2.506		
13,100.00	5,530.00	13,418.87	5,821.00	114.20	114.71	150.40	7,566.82	122.39	334.69	199.45	135.23	2.475		
13,200.00	5,530.00	13,518.87	5,821.00	115.65	116.16	150.40	7,666.82	122.39	334.69	197.76	136.92	2.444		
13,300.00	5,530.00	13,618.87	5,821.00	117.11	117.62	150.40	7,766.82	122.38	334.68	196.07	138.61	2.415		
13,400.00	5,530.00	13,718.87	5,821.00	118.57	119.07	150.40	7,866.82	122.37	334.68	194.38	140.30	2.385		
13,500.00	5,530.00	13,818.87	5,821.00	120.02	120.52	150.40	7,966.82	122.37	334.68	192.69	141.99	2.357		
13,600.00	5,530.00	13,918.87	5,821.00	121.48	121.98	150.40	8,066.82	122.36	334.68	191.00	143.68	2.329		
13,700.00	5,530.00	14,018.87	5,821.00	122.93	123.43	150.40	8,166.82	122.35	334.68	189.31	145.37	2.302		
13,800.00	5,530.00	14,118.87	5,821.00	124.39	124.89	150.40	8,266.82	122.35	334.68	187.61	147.07	2.276		
13,900.00	5,530.00	14,218.87	5,821.00	125.85	126.35	150.40	8,366.82	122.34	334.68	185.92	148.76	2.250		
14,000.00	5,530.00	14,318.87	5,821.00	127.31	127.80	150.40	8,466.82	122.33	334.68	184.22	150.45	2.224		
14,100.00	5,530.00	14,418.87	5,821.00	128.76	129.26	150.40	8,566.82	122.33	334.68	182.53	152.15	2.200		
14,200.00	5,530.00	14,518.87	5,821.00	130.22	130.72	150.40	8,666.82	122.32	334.68	180.83	153.84	2.175		
14,300.00	5,530.00	14,618.87	5,821.00	131.68	132.17	150.40	8,766.82	122.31	334.68	179.13	155.54	2.152		
14,400.00	5,530.00	14,718.87	5,821.00	133.14	133.63	150.40	8,866.82	122.31	334.67	177.44	157.24	2.128		
14,500.00	5,530.00	14,818.87	5,821.00	134.60	135.09	150.40	8,966.82	122.30	334.67	175.74	158.93	2.106		
14,600.00	5,530.00	14,918.87	5,821.00	136.06	136.55	150.40	9,066.82	122.30	334.67	174.04	160.63	2.083		
14,700.00	5,530.00	15,018.87	5,821.00	137.52	138.01	150.40	9,166.82	122.29	334.67	172.34	162.33	2.062		
14,800.00	5,530.00	15,118.87	5,821.00	138.98	139.47	150.40	9,266.82	122.28	334.67	170.64	164.03	2.040		
14,900.00	5,530.00	15,218.87	5,821.00	140.44	140.92	150.40	9,366.82	122.28	334.67	168.94	165.73	2.019		
15,000.00	5,530.00	15,318.87	5,821.00	141.90	142.38	150.40	9,466.82	122.27	334.67	167.24	167.43	1.999		
15,100.00	5,530.00	15,418.87	5,821.00	143.36	143.84	150.40	9,566.82	122.26	334.67	165.54	169.13	1.979		
15,200.00	5,530.00	15,518.87	5,821.00	144.82	145.30	150.40	9,666.82	122.26	334.67	163.84	170.83	1.959		
15,300.00	5,530.00	15,618.87	5,821.00	146.28	146.76	150.40	9,766.82	122.25	334.67	162.14	172.53	1.940		
15,400.00	5,530.00	15,718.87	5,821.00	147.74	148.22	150.40	9,866.82	122.24	334.66	160.44	174.23	1.921		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	Hz	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design Sec 25-T10N-R58W - Razor #25N-2440 - Hz - APD												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
15,500.00	5,530.00	15,818.87	5,821.00	149.20	149.68	150.41	9,966.82	122.24	334.66	158.73	175.93	1.902	
15,600.00	5,530.00	15,918.87	5,821.00	150.67	151.14	150.41	10,066.82	122.23	334.66	157.03	177.63	1.884	
15,691.20	5,530.00	16,010.07	5,821.00	152.00	152.48	150.41	10,158.02	122.23	334.66	155.48	179.18	1.868 SF	



WOG

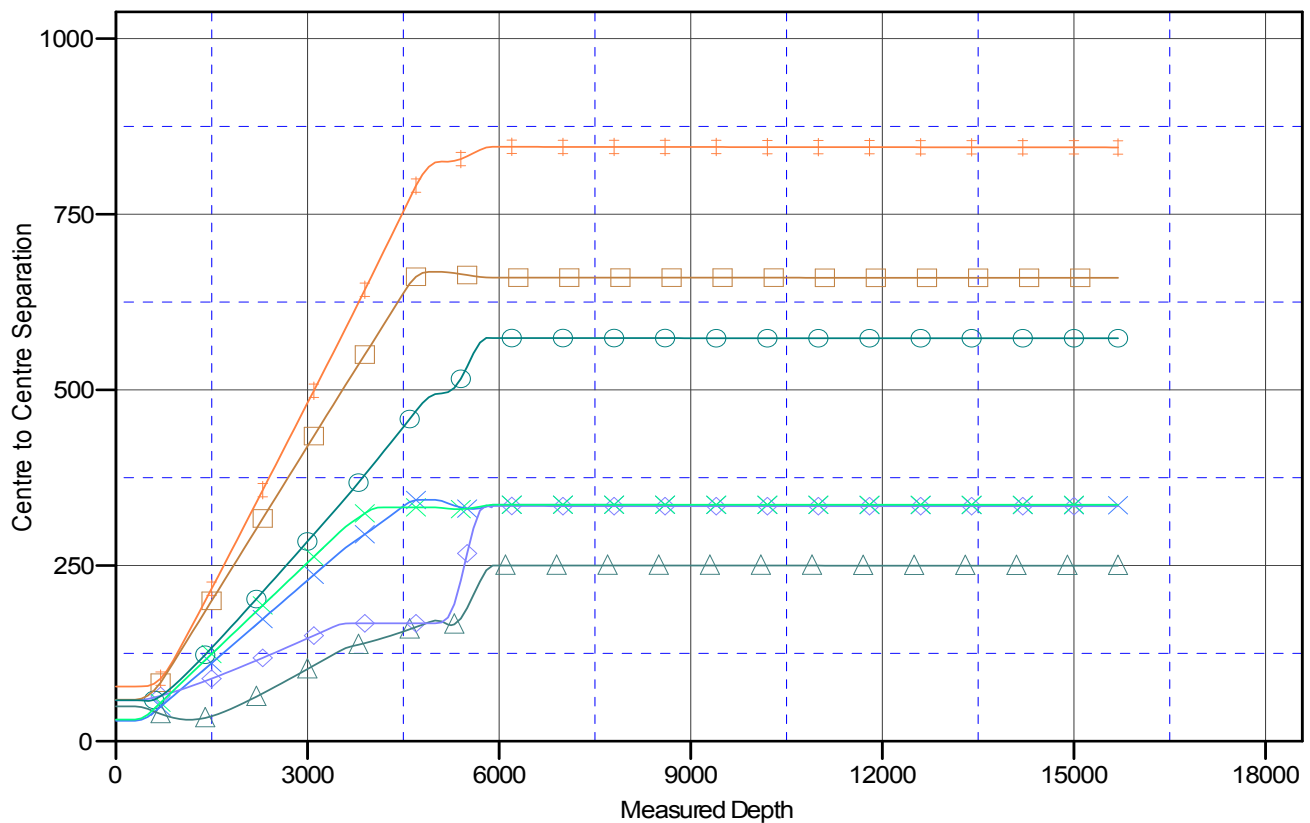
Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2407
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2407	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	Hz	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KBE @ 4722.00usft (Original Well Ele
Offset Depths are relative to Offset Datum
Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: Razor #25N-2407
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 1.09°

Ladder Plot



LEGEND

- ✕ Razor #25N-2406, Hz, APDV0
- + Razor #25N-2437, Hz, APDV0
- Razor #25N-2438, Hz, APDV0
- △ Razor #25N-2439, Hz, APDV0
- Razor #25N-2405, Hz, APDV0
- ◇ Razor #25N-2440, Hz, APDV0
- ✕ Razor #25N-2408, HZ, APDV0



WOG

Anticollision Report

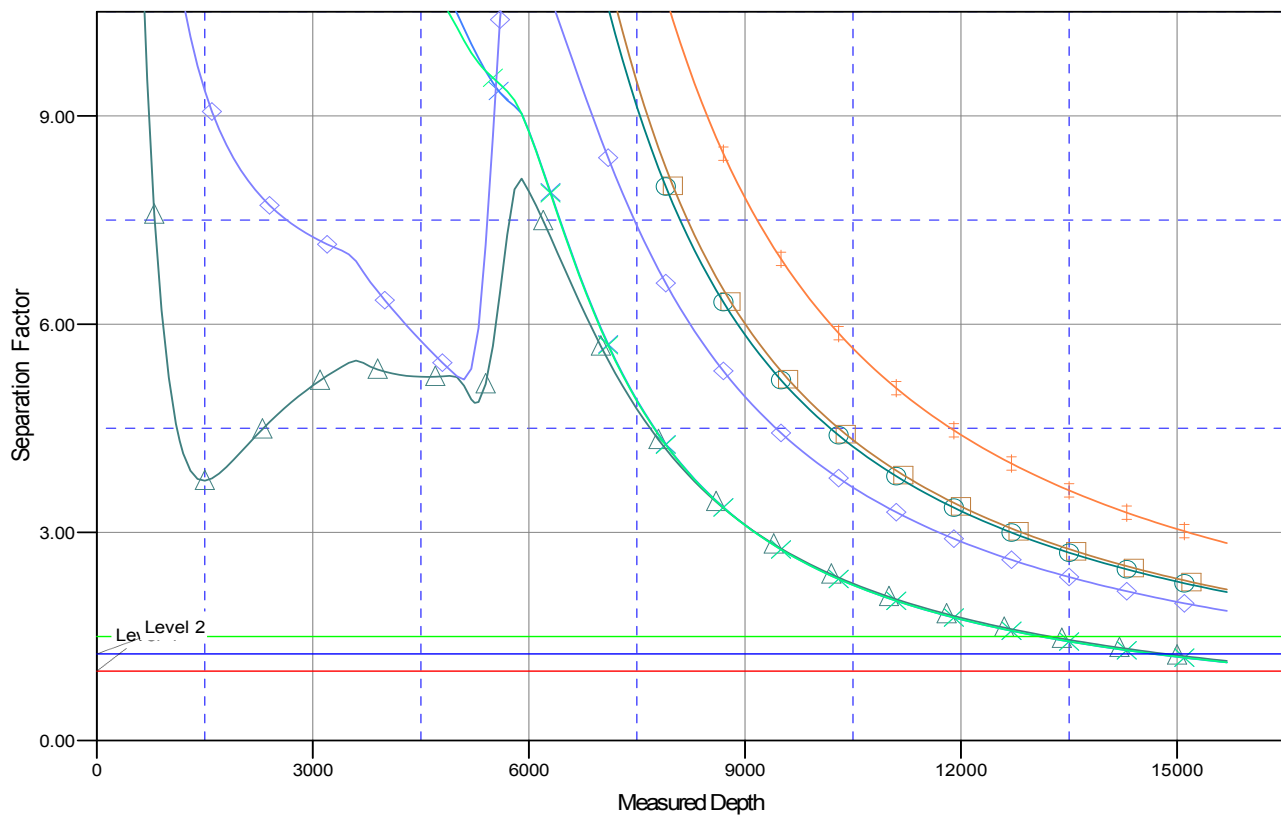
Company: Whiting Petroleum Corp.
Project: Weld County, CO
Reference Site: Sec 25-T10N-R58W
Site Error: 0.00 usft
Reference Well: Razor #25N-2407
Well Error: 0.00 usft
Reference Wellbore: Hz
Reference Design: APD

Local Co-ordinate Reference: Well Razor #25N-2407
TVD Reference: KBE @ 4722.00usft (Original Well Elev)
MD Reference: KBE @ 4722.00usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 3.00 sigma
Database: LandmarkEDM
Offset TVD Reference: Offset Datum

Reference Depths are relative to KBE @ 4722.00usft (Original Well Ele)
Offset Depths are relative to Offset Datum
Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: Razor #25N-2407
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 1.09°

Separation Factor Plot



LEGEND

- * Razor #25N-2406, Hz, APD V0
- * Razor #25N-2437, Hz, APD V0
- o Razor #25N-2438, Hz, APD V0
- * Razor #25N-2439, Hz, APD V0
- * Razor #25N-2405, Hz, APD V0
- * Razor #25N-2440, Hz, APD V0
- * Razor #25N-2408, HZ, APD V0